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AUTHOR	Freschi, David F.
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ABSTRACT

The purpose of this ten-month project was to determine the value of providing prevocational training to sixteen autistic and/or neurologically impaired children at Benhaven School, New Haven, Connecticut, a school for moderate and severely handicapped preadolescent and adolescent students. Objectives were to evaluate each child's potential for acquiring functional skills, to instruct each child in vocational readiness skills, to assess each child's progress, and to determine the predictive value of teacher ratings and selected psychometric tests. The prevocational program consisted of three separate but interrelated phases: (1) activities of daily living, (2) service-maintenance tasks, (3) production-assembly. Each of these phases consisted of tasks which were further defined into steps used in the evaluation of a child's competency level. Precision teaching techniques and one-to-one instruction were vital components of the program. Results indicated all of the children made noteworthy gains and that this model may be applicable to other populations. It was found that prevocational activities require careful selection and structure and that continual measurement is necessary. Parents of the children proved to be valuable members of the prevocation team; psychometric profiles were not predictively helpful. More than half of the report consists of appendixes and student reports. (EA)

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AN EXPERIMENTAL PREVOCATIONAL TRAINING PROJECT FOR AUTISTIC AND NEUROLOGICALLY IMPAIRED CHILDREN

FINAL REPORT

David F. Freschi
Project Director
Benhaven
9 St. Ronan Terrace
New Haven, Ct. 06511

June, 1973

CONNECTICUT STATE DEPARTMENT OF EDUCATION
DIVISION OF VOCATIONAL EDUCATION
RESEARCH AND PLANNING UNIT
HARTFORD, CONNECTICUT

TABLE OF CONTENTS

Preface

Chapter 1
Introduction ----------page 1

Chapter II
General Design ----------page 3

Chapter III
Population ----------page 4

Chapter IV
Method and Procedures ----------page 14

Chapter V
Supervision Core Frame----------page 22

Chapter VI
Precision Teaching Application ----------page 26

Chapter VII
Results ----------page 29

Chapter VIII
Discussion ----------page 37

Appendix A - Frames

Appendix B - Charts

Appendix C - Reports

SUMMARY

The intent of this project was to determine the value of providing prevocational training to 16 autistic and/or neurologically impaired children. These children were enrolled at Benhaven, a school for moderate and severely handicapped pre-adolescent and adolescent students. The prevocational program covered a period of 10 months and included Activities of Daily Living, Service-Maintenance Acts, and Production-Assembly tasks.

Precision teaching techniques were adapted in a one to one instructional context. Teacher ratings of the children and a battery of selected psychometric scores also were obtained in an effort to determine the predictive power of each measure relative to the progress of this group. The results of the project were as follows:

1) All of the children made noteworthy gains. It was demonstrated, therefore, that autistic and neurologically impaired children are capable of profiting from prevocational training and can be trained to perform gainful activities.

2) The parents of these children proved to be valuable members of the prevocational team insofar as they assisted in carryover of the children's ADL skills to the home.

3) Prevocational activities for this group should be carefully selected, analyzed, and structured so as to make quality an integral part of each activity.

4) A framework for implementing, and evaluating prevocational activities was developed which may be applicable to other populations.

5) Continual measurement must be included in the instructional process to maintain and upgrade the quality of that process. Precision teaching techniques are highly efficient for such ongoing assessment.

6) The psychometric profiles of the children were not of particular value in predicting degree of success for this group in the prevocational training program.

These children clearly demonstrated that they possess the potential for acquiring gainful skills. Programs which are more ambitious than those presently existing for this population should be instituted. Autistic and neurologically impaired children need not be relegated to custodial care. Society must continue to endorse innovative programs which are designed to provide these children with opportunities for independence and dignified labor.

PREFACE

In may of 1972, Benhaven received a grant from the Connecticut State Department of Education to attempt an experimental prevocational training project for autistic and neurologically impaired children. This report describes the project, its objectives, methods, and findings.

As in any new program, the number of contributors is large and it would be impossible to name everyone.

A very special debt is acknowledged to Amy Lettick, Director of Benhaven, without whom this study could not have been conceived. Her encouragement, professional guidance and untiring efforts inspired and aided us throughout the project.

Robert Echter served as assistant to the project director and Larry Wood was in charge of the day-to-day operation of Benhaven's prevocational program. They provided invaluable aid throughout this project.

Parenthetically, while this project was prevocational, this program should not be credited with contributing to all of the children's growth. Just as no child exists in parts, no curriculum should be judged in terms of only selected parts. The interaction of teacher and child during an academic session is as valuable as their interaction in a prevocational period, the language elicited from the child in a gross motor period is as significant as that in an assigned speech/language class. The child's growth in one area, therefore, affects all aspects of the child's development, and the total program contributes to the whole child.

All of Benhaven's professional and paraprofessional staff contributed to every phase of the project and to all of them is extended gratitude. A special thanks is offered to Mrs. Penny Fable, Mrs. Inger Connery, Robin Wood and Daniel Davis.

The advisory board members, consisting of prominent business and professional people, gave willingly of their time and expertise throughout the project.

Gratitude is expressed to the following members of the State of Connecticut, Department of Education, for their continued support, advice and encouragement: Herbert Righthand, Assistant Director, Division of Vocational Education; Richard C. Wilson, Research and Planning, Division of Vocational Education; Charles J. Bertagna, Research and Planning, Division of Vocational Education; Gabriel Simches, Education for Socially and Emotionally Maladjusted, Bureau of Pupil Personnel and Special Educational Services; Errol J. Terrell, Chief, Bureau of Vocational Services; Evelyn Lewis, Program Development-Handicapped and Disadvantaged, Bureau of Vocational Services.

Finally, and certainly not least, gratitude is extended to the sixteen children and their families who demonstrated through

their growth that the label is only the first step.

David F. Freschi
Project Director
Benhaven
New Haven, Conn.

CHAPTER I
INTRODUCTION

This report is the culmination of a ten month experimental, prevocational training program for autistic and neurologically impaired children conducted at Benhaven. The project was funded by the Connecticut Research Coordinating Unit for Vocational Education and Benhaven.

The results were sufficiently encouraging to suggest that improved programs not only for the children involved in this project but also for other individuals with similar handicaps are feasible. With this in mind, this report is submitted in the hope that the content may assist professional and paraprofessional workers who are involved in the improvement of services to the handicapped.

Objectives

The project, entitled An Experimental Prevocational Training Program for Autistic and Neurologically Impaired Children, had as its goals the following:

1. To evaluate each child's potential for acquiring functional skills which are necessary for success in the world of work.

2. To instruct each child in vocational readiness skills via innovative techniques, materials, organizational work models, etc.

3. To assess each child's progress by means of ongoing precise measurements of individual growth in specific activities as well as pre- and post-evaluations of progress.

4. To determine the predictive value of teacher ratings and selected psychometric tests relative to the children's achievements in this program.

During the planning of this study, it was decided that: 1) every effort should be made to make the program as functional as possible, 2) the program should be designed to be ongoing and dynamic, and 3) useful guidelines and methods should be developed which would be readily applicable to more intact populations of children than those served by Benhaven.

Benhaven

Benhaven is a non-profit day school established by Amy L. Lettick in 1967 for the education of autistic and neurologically impaired children.

Within Benhaven's two buildings are modified self-contained classrooms, a gymnasium, a music room, and two rooms set aside for prevocational project, plus a kitchen, laundrey, office space, and toilet facilities. The school is centrally located in New Haven and, therefore, the staff has access to a variety of community resources.

The school is in session twelve months a year, Monday through Saturday, from 9:30 a.m. to 4:30 p.m. This extended calendar was developed to provide the children with a maximum amount of instruction within a day school operation. This schedule is necessitated by the needs of the children. The severity of their handicaps is such that any less complete schedule invites regression during time away from the educational program.

Need

Children with problems as severe and diverse as those attending Benhaven do not usually receive instruction as intense and individualized as that offered by Benhaven. When this intensive service is offered, the evidence shows that the children can make significant gains in all areas of functioning. It is true that the children's achievements rarely provide them with a passport to the world of independent living. It is also true, however, that without intensive education, the prognosis for these autistic and neurologically impaired individuals is poor and that in the majority of cases institutionalization is the rule.

Despite the growth of our knowledge since 1943 when Leo Kanner coined the term "Early Infantile Autism"[1], the following statement by Gorman still seems apt:

> "When all is said we know little about autistic children and a lifetime of experience with them is to bring humility to the most arrogant."[2]

The primary concern and responsibility of the staff at Benhaven is to educate - not to diagnose - the child. Benhaven, therefore, is action based with individualized curricula designed to provide periodic accountability regarding the progress of each child.

Prevocational training has not been generally attempted with children whose behavioral disorders are as bizarre as those attending Benhaven. In this project, the term prevocational refers to those specific skills which were considered 1) necessary for the children to acquire if future vocational placement were ever to be considered and 2) intrinsically applicable to a large variety of gainful activities.

CHAPTER II
GENERAL DESIGN

The project extended over a ten month period. The program proceeded through three separate but related phases - Activities of Daily Living, Service-Maintenance, and Production-Assembly. Specialized materials and methods were developed to achieve the goals of the program. Psychometric tests were administered to the children to gauge the power of these instruments for predicting success in acquiring prevocational skills. Precision Teaching techniques as well as traditional statistical procedures were used to assess the children's progress.

Each child's prevocational program was coordinated with his total daily program as prescribed by his coordinating teacher. The daily program included academic readiness activities, perceptual training, fine and gross motor activities, academics, language and speech therapy, and personal-social skills.

Another essential aspect of the project involved the parents. One of the commonly reported characteristics of these children is their inability to generalize learning to different situations. To be of real value, an educational program must provide for carryover. Parent training and evaluation of carry over in the home were, therefore, instituted as an integral part of the project.

CHAPTER III
POPULATION

Sixteen children, fourteen boys and two girls, participated in this project. They ranged in age from 11 to 17 years; the median age of this group was approximately 13 years. The children were selected by the teachers on the basis that they had the potential for learning productive skills but did not necessarily possess:

1) Normal visual and/or auditory acuity
2) Fine motor integration
3) Perceptual integration
4) Abstract conceptualization

In addition, the children were selected only if their handicaps were sufficiently severe to require a one-to-one student-teacher ratio. These sixteen children expended tremendous effort and proved they could learn prevocational tasks when given the opportunity.

A background sketch of these children as well as excerpts from their progress reports during the ten months the project was in operation are given in this chapter.

The Children

	Name	Age	Diagnosis	Significant deterrants to Learning on Admission to Benhaven
1.	Harry	13	brain injured	distractibility, hyperactivit irrelevant verbalizations on weather, firemen, trees, thunder and wind, rocking, infantile regression, tantrums.
2.	Sam	15	autistic/brain injured	no speech, self destructive, tantrums, head banging, motor difficulties and withdrawal characterized by vacant staring with fingers in ears.
3.	Ralph	14	autistic	echolalic speech, poor auditory reception, low frustration tolerance, tantrums. Poor ability to generalize any skills.
4.	Doreen	12	autistic	withdrawal, echolalic speech, excessive weight, violent aggressive behavior - screaming, gigling, facial grimaces occurring when required to work.

Name	Age	Diagnosis	Significant deterrants to Learning on Admission to Benhaven
5. Lynn	12	autistic	low frustration tolerance characterized by episodic shouting and screaming. Some motor difficulties. Language used only to label and often irrelevantly. "Lynn what color is _____? "_____ "Uncle Freddy."
6. Mark	15	autistic	spatial perception problems, Resistance to any challenge in learning - "I don't want to." Some aggressive behavior when frustrated-poking teachers in eye with pencils. Odious compulsions such as eating from garbage cans, carrying dead animals, licking plates.
7. Duncan	13	brain injured	possible mental retardation, perceptual deficits, seizure disorder, distractibility, low frustration tolerance, stealing, violant behavior--generally required two or more adult males to restrain him.
8. Dexter	13	autistic	mesmerized by mechanical devices, visual deficits, mannerisms such as finger waving and rocking. Temper outbursts, physical assaults on teachers and destruction of materials and furniture.
9. Stan	17	autistic	no language, bizarre, interfering mannerisms and rituals--one hand in mouth while staring at the other waving fingers and screaming. Uncontrolled giggling, leaping into the air, no spontaneous interactions with adults or peers.
10. Bill	15	autistic	withdrawn, needs constant prodding to complete any but the most basic activity. Will often assault anyone when presented with work situation. Language is echolalic and generally irrelevant, never spontaneous.
11. Bob	16	autistic/deaf	rigidity and perseveration. No apparent language either receptive or expressive, interfering behaviors such as head banging, finger twiddling, noise making.

Name	Age	Diagnosis	Significant Deterrants to Learning on Admission to Benhaven
12. Hector	12	brain injured	no speech, poor sequential and motor planning abilities, resistance manifested in spitting, crying, refusal to move, no academic concepts of any type.
13. Bernard	11	autistic	poor articulation, inability to interact socially, stealing, defecating and urinating, academic concepts weak.
14. John	12	autistic	apparent inability to speak, no interpersonal relation with peers or adults, treats people as objects, extremely rigid and perseverative, often goes into tantrum when any object in a familiar room is out of place, unable to start work until prescribed rituals (adjusting calendar, arranging furniture, etc.) are completed.
15. Lester	13	autistic/deaf Wartenberg's syndrome	lack of speech, avoids any physical contact, lack of coordination between upper and lower half of body, runs away, gaze avoidance, refuses to respond.
16. Ronald	11	brain injured	speech is often irrelevant, no academic concepts, tantrums involve kicking, hitting, spitting, screaming, and destructi of materials.

1) Harry - Age 13, Diagnosis: neurological impairment.

Harry was one of Benhaven's original students. He entered as an extremely hyperactive, explosive child. He had no academic skill and his speech was perseverative and generally irrelevant. He was nighly destructive and resistance. Distractibility in all areas was high. The teacher was required to vary and restructure tasks for Harry every 3-4 minutes.

1972 Report: Harry is progressing in an individualized reading program. An eclectic approach with Harry is the most successful to date. Progress is now evident in all of the academic areas. While he has begun to socialize with his peers, he often will isolate himself and revert to infantile behavior. He has reached the

point where he is manageable within the highly structured school program. There are, at this point, serious reservations concerning his ability to carryover his progress at school into the home and the outside world.

1973 Report: Harry is making progress in all areas. His mother telephones daily to receive suggestions from Harry's teacher for follow-up in the home. This year, he has been able to leave the building for trips with his peers. This was impossible prior to 1973. His interaction with peers has also increased and infantile behavior has been sharply reduced. Distractability, although much improved, remains a major difficulty for Harry and, therefore, he continues to require supervision. In the academic area, he has been introduced to cursive handwriting. He is also working on word problems in addition and subtraction, learning to use money in a functional manner, and progressing in several directions in his reading.

2) Sam - Age 15, Diagnosis: Autistic/brain injured

Sam was enrolled as one of Benhaven's first students in 1968. He had no language beyond grunts and screams. He rocked incessantly and was given to violent tantrums and head banging. He first learned to speak through the efforts of Mrs. Amy Lettick, Benhaven's founder, who adapted the McGinnis approach to teach autistic children.

1972 Report: Sam has made consistent progress over the year in all academic areas. Reading comprehension and mathematics remain problem areas. Socially he has made positive gains and has started to establish contact with his peers as well as his teachers. Rocking and vacant staring remain the most obvious of his behavioral problems.

1973 Report: Sam is doing work in addition, subtraction, and multiplication. Sam is increasingly involved in the work being done in his academic lessons.

Short term goals for April, 1973: Practice making small change for purchases with pennies, nickels, and dimes. Increase correct usage of grammatical concepts.

Gross Motor Program: Sam is playing independently. Teacher interventions occur at a rate of zero to two per 25 minute period.

In light of the overall gains, Sam should be introduced to vocational training and limited job placement.

3) Ralph - Age 14, Diagnosis: brain damaged.

Ralph has generally been good-natured and eager to please. He is easily frustrated and functions academically, on a very low level. His greatest strengths would seem to lie in the visual areas.

1972 Report: Work and play in group situations have improved considerably. In the academic areas, he is progressing steadily Most of his performance in these areas is very rigid, however, and he seems unable to generalize.

1973 Report: Gains have been made in many areas. Ralph's difficulty in generalizing and self-initiation, remain as focal deterrents to his progress. He has been learning to answer questions about pictures (Where, how, many, what,color, action , etc.). He now understands money concepts up to one dollar. Ralph shows gains in the Production- Assembly tasks of the prevocational program where the lack of variation in the activities is consistent with his need for structure and routine.

4) Doreen - Age 12, Diagnosis: autistic

Doreen entered Benhaven with minimal communicative skills. Language, when used, was predominantly echolalic. She was unable to initiate activities and rarely completed any task on her own. Behaviorally, she used her unbridled strength to resist work. Her resistance took the form of screaming and violent attacks upon the teachers.

1972 Report: Tantrums, attacks, and screams have been reduced. Self-destructive behavior also has been reduced. When frustrated, she continues to resort to these inapproproate behaviors and will employ them when assigned to work with a new teacher or aide. Self-care and personal cleanliness are still problem areas. In academic subjects, she shows slow but steady progress. Her auditory comprehension has improved and she is working on all components of sentence/questions in practical situations.

1973 Report: Doreen has been placed with classmates of her own age level in an effort to increase her social interaction. Physical attacks are largely extinguished. While she does not use spontaneous language very often in group situations, she responds appropriately when questioned directly.

5) Lynn - Age 12, Dignosis: autistic

Lynn came to Benhaven as an extremely frightened child. What speech she had was either telegraphic or echolalic. Her general behavior was withdrawn, ritualistic, rigid, and fearful.

1973 Report: She has made good progress at Benhaven. Lynn's speech has become more relevant this year. She has begun to use spontaneous speech to express her emotions. Academic progress has been steady. In the social area, her self-control and peer-interactions improved. Major tantrums have decreased dramatically.

6) Mark - Age 15, Diagnosis: autistic

On entering Benhaven, Mark's behavior was socially unacceptable. He would take garbage from refuse cans and eat it. He mutilated himself by biting and pinching his breasts and when frustrated or

pressured to perform, he would strike the teachers. His fine motor control and spatial relations were extremely poor. Academic functioning was low. Communication and interaction were infrequent. Language was characterized by pronoun confusion.

1972 Report: Mark's self-destructive acts have been eliminated. His spontaneous interactions and eye contact have been steadily increasing. Progress in all the academic areas is steady. His overall growth pattern has been very encouraging.

1973 Report: His oral reading level is about fourth grade. Comprehension is on the second to third grade level. Comprehension has shown a marked jump on stories that he has composed. He is now able to read and write "time" to hour and half hour. He tells time to the minute with 50% accuracy. Social gains have started to reappear after his depression during the previous month. He seems to have adjusted to moving to Benhaven's residential facility.

7) Duncan - Age 13, Diagnosis: brain injury, mental retardation, multiple perceptual deficits.

Duncan has been a student at Benhaven for 2 years. Initially he was referred to Benhaven for two reasons. The first had to do with the multiplicity of his handicaps. The second had to do with the unmanageable behavior patterns that he demonstrated. During his first few months at Benhaven, Duncan spent much of his lesson time in restraints. This was necessary because of his violent and uncontrolled behavior. Nevertheless, he made progress.

1972 Report: Duncan's work habits and behavior have improved so much that progress in the academic areas, though slow, is steady. In the social area, he displayed marked growth in self-control. Stealing and aggressive acts directed toward adults have decreased markedly. Parenthetically, Duncan has never struck or assaulted another child.

1973 Report: Duncan now comments upon his own social growth. "Do you remember when you used to have to tie me up?"

Fear of failure in reading seems to have decreased. He recognizes numerals to 20 and sequences them through 10. Plans have been prepared for a program that would involve Duncan in vocational training and eventual placement outside of Benhaven.

6) Dexter - Age 13, Diagnosis: autistic

Although Dexter has been labeled "autistic," his ability to relate is quite good, and he is a child who seeks social approval. Nevertheless, he presents behavioral difficulties as well as substantial deficits in academics and general skills. He is also considered legally blind. He has, with training, learned to employ his residual vision more efficiently.

1972 Report: Dexter's fine motor control has improved noticeably, but his visual motor integration remains a problem. Behavior such as drooling, spitting, smelling, striking teachers, shouting, destroying furniture continue to be evident.

1973 Report: Dexter is now reading in book 2 of his linguistic reader. Word attack skills have improved considerably. Behavior has improved markedly.

Also, he has started to work in the gross motor periods with three other children. His motor development shows steady growth.

9) Stan - Age 17, Diagnosis: autistic

Stan had been at Benhaven for approximately 6 months. He is nonverbal and functions on a very low level in most activities. He displayed no interaction with peers and very little with adults. Despite the overall low level of functioning, Stan cooperates and, when he is able to understand what is expected of him, he attempts to carry out the activity.

1973 Report: Stan now associates 18 words and written phrases with appropriate manual signs. He is now performing routine maintenance activities about the school building with minimal supervision.

Motor Planning: Stan has learned to vary his responses when retrieving objects beyond his reach.

Socialization in groups: Stan does not understand concepts of rules, teams, competition, etc. He does not, at this point, initiate interaction with his peers. He does apparently enjoy the activity of the group.

10) Bill - Age 15, Diagnosis: autistic

Bill has been at Benhaven three years. He is aggressive on occasion, and very low functioning.

1972 Report: He has great difficulty in generalizing. He requires constant prodding to complete any activity. His coordination, while improving, also remains a problem.

1973 Report: Bill is able to read several words related to his lunch preparation (a self-care activity which has been taught to him). Long term goals would be concerned with increasing his independent functioning in ADL activities.

11) Bob - Age 16, Diagnosis: autistic/brain injured.

Another of Benhaven's original population, Bob is typical of the very low functioning child for whom the general prognosis has been poor. He has a repertoire of ritualistic mannerisms with little meaningful speech in other than rigid and tightly structured situations and no generalization of language or its concepts. The

key question concerning Bob is whether custodial care is the answer or if there are viable, dignified, and productive alternatives for him. The 1972 summary report indicated areas of continuing disability as well as some encouraging signs of progress.

1972 Report: While Bob remains a child who is unable to initiate activities and relationships spontaneously, he has demonstrated that, when occupied in a meaningful task, he can do some productive work and is able to relate, on a primitive level, to other individuals. Emphasis in reading has been placed on words and phrases that would be required in vocational settings: put in, take out, in, on, under, etc.

1973 Report: Bob now is signing from word cards and typing them. He is signing with adults to receive specific foods and asking to "go outside" at appropriate times. Bob appears more receptive to interaction with others and is initiating play with certain individuals.

12) Hector - Age 12, Diagnosis: brain injured.

Hector is one of Benhaven's original children. He is mute and, until this year, had had no effective means of communication. His overall functioning has been very low. Only the perseverance of his parents, the local community, and Benhaven's staff has prevented him from being placed in a custodial situation.

1972 Report: Hector showed some progress and some breakthroughs.

1973 Report: While Hector remains a severely handicapped individual, he has begun to use sign language to communicate. There has been a significant and encouraging improvement in spontaneous communication via signing in semi-structured situations. Hector continues to demonstrate a greater degree of flexibility in his behavior. He has added five new words to his vocabulary this month. Behaviors, such as kicking, spitting, and throwing objects, seem to be eliminated.

Motor planning, sequencing, and spatial relationships remain difficult areas for Hector.

13) Bernard - Age 11, Diagnosis: autistic

Bernard entered Benhaven as a quiet, withdrawn child. His language was minimal, and his speech was often unintelligible. Self-care skills were generally inadequate. As he became accustomed to the school situation, several attention-getting behaviors manifested themselves at a disturbing level--stealing, standing on furniture, and mimicking other children. The 1972 Report stated that these behaviors were interfering with Bernard's progress. His unsupervised contact with his peers was generally quite immature, with very little volitional language. Attention continued to be given to increasing his social interactions and use of language. There were encouraging signs, however. In academics, he was reading with comprehension on a first grade level. In math, he was working

at a third grade level, although at this point this skill seemed to be largely rote.

1973 Report: Bernard is now using past tense in structured situations. His voice quality, articulation, and other aspects of speech have improved noticeably. Independent work periods are being emphasized. Bernard and his family are now participating in a self-care program at home which is designed to help Bernard to become fully responsible for his self-care activities and to communicate his needs more effectively. Overall progress for this year has been great. In September of 1973, Bernard will return to a public school program.

14) John - Age 12, Diagnosis: autistic

John had no language, few academic concepts and was prone to tantrums, crying spells, and negativism. He was quite rigid and could not adjust to any variation in his daily routine.

1972 Report: John has learned to sign and voluntarily attempts to communicate. He has begun to use sign language regularly in an aural-sign/sign communication system.

Overall, he is less rigid and perseverative in the classroom and he is more tolerant of changes in routine and more flexible in his methods of performing activities. Reading is still hampered by his difficulty in formulating meaningful associations to words. The gross motor teacher reported that he has developed the motor skills necessary to succeed at prevocational tasks. Interaction with children was sporadic at best.

1973 Report: The quality of John's signing has improved markedly. He can now read and answer questions about teacher prepared stories concerning John's life. He is also learning to answer questions about pictures such as; where? how many? who? what? (color, action, and description). His preciseness and attention to detail may prove to be advantageous in the prevocational program. In activities such as typesetting, his rigidity, which has been a deterrent to learning, may become an asset.

15) Lester - Age 13, Diagnosis: autistic, deaf with Wartenberg's syndrome.

Lester's presenting handicaps were: bizarre mannerisms, task avoidance, high distractibility, non-verbal and limited ability in social relations. In 1972, a varied program of highly structured activities, with individualized programming, contingency contracting, and consistency in approach had reduced task avoidance and increased his attention span.

Interaction with peers and teachers also increased. On the academic level, he learned cursive handwriting. Lester is working on sentence formation in reading and language. His major weakness appears to be receptive, i.e., the retention of a complete sentence which is presented manually. Signing has become the language form

of choice with Lester, and he nows appears willing and interested in communication.

1973 Report: Lester is making good progress in a typing program. The vocabulary in his language program has been increased. He is demonstrating growing understanding of the calendar, clock, and money.

16) Ronald - Age 11, Diagnosis: brain injured.

Ronald's behavior was characterized by tantrums and assaults. His level of academic functioning was very low, and, in fact, the entering reports from his prior placement indicated that he failed to learn any academic skills.

1973 Report: Ronald shows gains in all areas. He is in a reading program, is counting, writing numbers, and working on simple addition. Ronald's behavior, while still marked by an occasional tantrum, has shown dramatic reduction in aggressive behavior.

He is functioning well in modified games. Spontaneous, relevant language has been increasing.

CHAPTER IV
METHODS & PROCEDURES

The prevocational program was divided into three separate but interrelated phases. Each segment consisted of a group of related tasks with continual evaluations made of the children's progress in accomplishing each of the tasks.

Phase I - Activities of Daily Living (ADL)

The first unit of Benhaven's prevocational program was Activities of Daily Living (ADL). Self-care skills are prerequisites to productive employment and positive work attitudes. The 16 autistic and neurologically impaired children who participated in this program were either lacking in self-care skills or possessed only a rudimentary appreciation of these tasks. The ADL activities which were chosen could be considered as "pre" prevocational in nature. This initial phase was necessary for the following reasons:

1) There was an obvious need for this group of children to acquire these basic skills.

2) Lack of progress in these activities would make gains in other more vocationally-oriented areas of extremely limited value.

3) Improvement in these skills would have an immediate impact in the school and the home in that:

a) there would be a reduction in the amount of supportive attention required by the children,

b) the children would have more time and opportunity to learn sophisticated and productive skills,

c) emphasis on these fundamental skills would induce the parents to become involved in a constructive way with the project in particular and the school program in general. The necessity for parent participation is obvious. Charles Galloway of the Eastern Nebraska Community Office of Retardation (ENCOR) expressed this well when he stated:

> "We would like to help the parents become more self sufficient. That means less reliant on folks like us... Our job as professionals is to teach people how to use tools, not to be a crutch for society."[3]

The seven tasks which were chosen for the ADL phase were:

1) Toileting
2) Showering
3) Toothbrushing
4) Dressing
5) Meal preparation
6) Street Crossing
7) Work Space

In numbers 1-4, the children were able, for the most part, to go through some of the motions required with each of these activities. However, independent completion was generally lacking. For example, while it was assumed that all the children were toilet trained, the pre-test evaluation revealed that most of the children were unsatisfactory incompleting all aspects of toileting.

5) Meal Preparation - All the children could feed themselves. None of the children were able to prepare a simple balanced meal from start to finish.

6) Street Crossing - Even the highest functioning children were ignorant of the proper procedures for street crossing and were unable to safely perform this activity.

7) Work Space - The majority of the children lacked the ability to move about the school building independently, and to move to and return from any location in their work space on request.

Phase II - Service-Maintenance Tasks

The Service-Maintenance Tasks consisted of those skills and activities which required altering of an existing finished item or area as opposed to actual assembly-line type work. These activities did not involve producing or assembling of finished products.

Phase II seemed to build naturally upon the first unit (ADL) and was a logical second step in the prevocational program. As with the first phase:

1) The children lacked Service-Maintenance skills.

2) Benhaven offered ample opportunity for the introduction of Service-Maintenance tasks.

3) Acquisition of these skills would, as in Phase I, have an immediate impact in the home and the school by providing the children with productive skills that:

a) could be utilized in a limited environment, and

b) could reduce their dependency.

4) The "real" world towards which the present program was aimed (despite the fact that many of the children might require varying degrees of shelter and support throughout their lifetimes) is in greater and greater need of people who have acquired service oriented skills. Progress in this area for these children could help to lead the way to marketable skills.

5) The Service-Maintenance activities required many gross motor skills, and, therefore, was within the grasp of those children who were deficient in fine motor areas.

The second unit of this prevocational program consisted of these Service-Maintenance tasks:

I. Floor Care

A) Vacuuming
B) Mopping
C) Sweeping

II. General Cleaning

A) Cleaning walls (vertical surfaces)
B) Cleaning tables (horizontal surfaces)
C) Cleaning sinks

III. Home Machinery

A) Operating dishwasher
B) Operating clothes washer
C) Operating clothes dryer
D) Ironing

Phase III - Production-Assembly

This final phase, Production-Assembly, involved the handling of some product. The production aspect included activities which resulted in a finished product from unfinished material. The assembly tasks consisted of finished materials which were either assembled into a whole functioning product or packaged into units. This phase was felt to be important because:

1) the "bench-work" model provides opportunities which appear to be the most commonly offered to the handicapped.

2) The facilities were available for several activities of this type.

3) These activities are easily restructured for the handicapped eg., color coding of controls, fixed numbering of parts, and specialized adaptation of machinery.

4) The work activities could be made to simulate real job functions.

5) The tasks would involve fine motor skills which might complement the training that the children received during the previous phases.

6) These children should be given the opportunity to attempt more refined tasks.

The seven jobs chosen in Phase III were:

1) Printing (hand press)
2) Type setting
3) Operation of copying machine (Xerox 2400)
4) Operation of Mimeograph (Gestetner hand operated)
5) Packaging
6) Valve Assembly
7) Compression Union Assembly

Items 6 and 7 were chosen because they were tasks which did not lend themselves readily to machine assembly and could be varied in complexity.

In the general scheme, each phase was to be a progression which built upon the information acquired about each child in the previous prevocational unit. This approach enabled the teachers to plan the succeeding phases of the project according to the assets and liabilities of the child, and to capitalize upon any special talents which the child demonstrated in the preceding phase.

Phase I - Activities of Daily Living

Each of the seven tasks which was selected for the ADL (Activities of Daily Living) unit was first broken down into steps. The steps ranged in number from six to forty-five depending upon the complexity of the activity and the child's initial capabilities. The child's competency level with each task was judged in terms of his ability to perform the activity either independently or with assistance. Throughout this study, the emphasis was upon teaching the child to assume a maximum amount of independence in accomplishing each of the activities. The seven ADL tasks have been listed on pages

As the child progressed through a task, the number of steps he completed satisfactorily was recorded and charted. On page is a copy of the instructor's rating sheet for evaluating the child's progress. The rating sheet specified the ADL function and the discrete steps to successful completion. (Note: the steps on the check list do not necessarily indicate a required sequence of steps.) Sufficient flexibility was maintained so that the sequence could be revised in keeping with each child's particular needs or abilities.

Following the initial evaluation, the teaching model involved one-to-one instruction and intensive practice at each step. Supportive instruction in such areas as language and motor skills necessary for successful completion of the tasks were incorporated into the regular school program by Benhaven's academic personnel. The duration of instruction for each phase was approximately ten weeks.

The parents were requested to evaluate their children over a period of ten weeks on five of the ADL tasks. Their judgments

were recorded on the same check list (page 19a) that had been used during the evaluative-teaching sequence. The units selected for parental evaluation were toileting, showering, toothbrushing, dressing, and street crossing.

Phase II - Service-Maintenance

This phase consisted of ten tasks. These can be found on page 16 As in Phase I, the tasks were broken down into steps. With Phase II, however, a model for analyzing tasks into levels was developed. This was called the Supervision Core Frame. The basic core framework is shown on page 23 Samples of the core are given in Appendices. Briefly, the Supervision Core Model is an analysis of the task into levels with clearly defined objectives at each level so that the instructors could assess the child's performance at each level. This approach seemed efficient for promoting individual student growth and was more meaningful than the traditional norm-referenced systems which are often inappropriate when working with handicapped populations. As Kibler et al. have stated:

> "Some educators feel that the purpose of education is not to determine who learns more and less of a given subject matter, but rather to see to it that all students learn what is considered necessary... This approach does NOT(sic) negate the possibility of providing the opportunity for students to go beyond the basic required objectives."[4]

The model is consistent with one of the main goals of the project - to produce useful methods and practical devices which could be adapted by other special schools.

The Supervision Core Model, page 23 makes reference to two "cores." The first core for initial evaluation of the learner is a "test" situation and serves as a basis for further learning. The second core helps the task designer to plan activities related to the "real" world. The literature is replete with isolated instances of short term experiments which rarely go beyond the laboratory setting. On the other hand, the core structure included in this study is applicable to many situations insofar as it is flexible and open-ended.

There were occasions when a child could perform all levels of a task. However, if all levels can only be performed under maximum supervision, the statement that the child can perform a given task loses much of its validity. Who could blame an employer or even the sheltered workshop director from shying away from a worker who requires one-to-one supervision to maintain productivity? Therefore an evaluation method was devised to allow for as much independent growth as possible. Since there were specific objectives at each level and for each task on the Supervision Core frame, acceptable quality was an integral part of these objectives. The inclusion of a quality as well as a quantity measure for each

ADL BENHAVEN PARENT FEEDBACK FORM DATE: _____

Child's Name: _____

	Ind	W.H.
Toileting		
1.Go to bathroom		
2.Enter		
3.Close door		
4.Prepare cloth		
5.Sit down/ perform funct.		
6.Take paper		
7.Clean self adequately		
8.Drop paper in bowl		
9.flush		
10.Replace cloth		
11.Wash hands		
12.Dry hands		
13.Leave room		
Toothbrushing		
1.Go to sink		
2.Pick up paste		
3.pick up brush		
4.Unscrew cap		
5.Paste brush		
6.Brush front teeth		
7.Brush right side		
8.Brush left side		
9.Fill cup with water		
10.Rinse mouth		
11.Rinse brush		
12.Screw cap on brush		
13.Put away brush		
Care of Clothing		
1.Take off shirt/ blouse,hang on hanger in closet. button top button		
2.Take off shoes, put on closet floor		
3.Take off books,put into laundrey bag, hamper, etc.		
4.Take off belt,put into dresser, closet.		
5.Take trousers,shirt and hang on hanger in closet.		
6.Take off underwear, put in laundrey bag.		
Dressing		
1.Put on underwear		
2.Put on shirt/blouse		
3.Put on socks,shoes		
4.Put on,fasten shoes		
5.put on trousers/skirt/ dress		
6.Buckle/button/fasten		
7.Check appearance		
8.Correct if necessary		
Showering		
1.Go to shower room		
2.Walk in		
3.Close door		
4.Remove all clothing		
5.Hang up or set neatly		
6.Turn on water		
7.Adjust water		
8.Pick up and carry soap.		
9.Pick up and carry shampoo		
10.Pick up and carry washcloth		
11.Enter shower		
12.Close curtain		
13.Put material down		
14.Soak body.		
15.Use washcloth		
16.Pick up soap		
17.Lather.		
18.Washes:		
Face		
Ears		
Neck		
Chest		
Stomach		
Left Arm		
Right Arm		
Underarms		
Genitals		
Right Thigh		
Right Shin		
Left Thigh		
Left Shin		
Right Foot		
Left Foot		
Back		
Left Buttock		
Right Buttock		
Anus		
19.Pick up shampoo		
20.Open shampoo		
21.Pour shampoo into hand.		
22.Apply shampoo into head		
23.Scrub head		
24.Rinse head		
25.Step out of shower		
26.Turn off water		
27.Dry self w/towel		
Street Crossing		
1.At curb:look left look right		
2.Begin to walk: look left,look right,look left		
3.Approach mid-street look right,left		
4.Walk briskly.		
5.Avoid traffic		

Ind.=Independent, The child can do this step by himself and acceptably

W.H.=With Help, The child requires prodding and/or assistance.

1.Check off those steps which your child requires help on and those that he/she can do independently.

2.Return form to Benhaven.

3.Add any comments questions, or opinions that you feel would be helpful to us or that you would like assistance with. Your comments are appreciated and are a positive help in improving our program.

c 1972 Benhaven

step of Phases II and III permitted the teachers to evaluate with considerable precision, the children's performance as well as the amount of supervision required to achieve that performance. Three grades of supervision were established for each level of each task. These were:

Grade 1) Instruction and supervision required to achieve satisfactory completion of the task.

Grade 2) Supervision required to achieve satisfactory competion of the task.

Grade 3) Minimum supervision (an initiating directive) required for independent and satisfactory completion of the tasks within the specific environment.

The amount of supervision was determined by counting the frequency of Supervisory Interventions necessary to enable the child to complete the task or level. These interventions were referred to as "SI's" or "prods" and every intervention, instructional or disciplinary, was recorded by the instructor and charted on standard daily behavior charts for each child in each task. This procedure provided a graphic record of the child's growth allowing his problem to be quickly isolated. Furthermore, the training of instructor and paraprofessional was simplified and speeded up. During the project it was noted informally that an instructor could learn to record the data accurately on the chart with less than 4 hours of training.

Unlike Phase I, the children were not brought through every step of a task until they had successfully performed at a particular level. In Phases II and III, a child was considered ready to go on to the next level when he could complete that level under the environmental conditions specified with minimum supervision. This on-going assessment permitted far more meaningful statements to be made concerning the child's growth than was possible with a simple pre- and post assessment of change.

Phase III - Production-Assembly

The third and final phase of the project involved seven tasks which were classified as Production-Assembly. These required the handling of some product, either in finished or partially finished form. Activities were selected which conformed to the traditional "bench work" models for the handicapped and which required skills that were applicable to a variety of other tasks. The seven tasks were:

1) Printing (hand-press)
2) Type setting
3) Copy Machine (Xerox 2400)
4) Mimeograph (Hand operated Gestetner)
5) Packaging
6) Valve Assembly
7) Compression Union Assembly

The procedures for job breakdown, evaluations, teaching, and re-evaluations followed that of Phase II. Tasks were set on the Supervision Core Model and the children were brought through the specific levels. Evaluation, again, involved measurement of individual progress through the chartingoof Supervisory Interventions as well as traditional pre-post measures.

The Supervision Core Model for task design and development functioned well during Phase III. Charting provided a wealth of meaningful information that would perhaps have been missed had a more traditional approach been adopted.

CHAPTER V
THE SUPERVISION CORE FRAME

A primary objective of the project was the development of tools and techniques that were applicable to a wide variety of prevocational skills and populations. This objective was realized, in part, with the development of the Supervisory Core Frame.

This device was designed to:

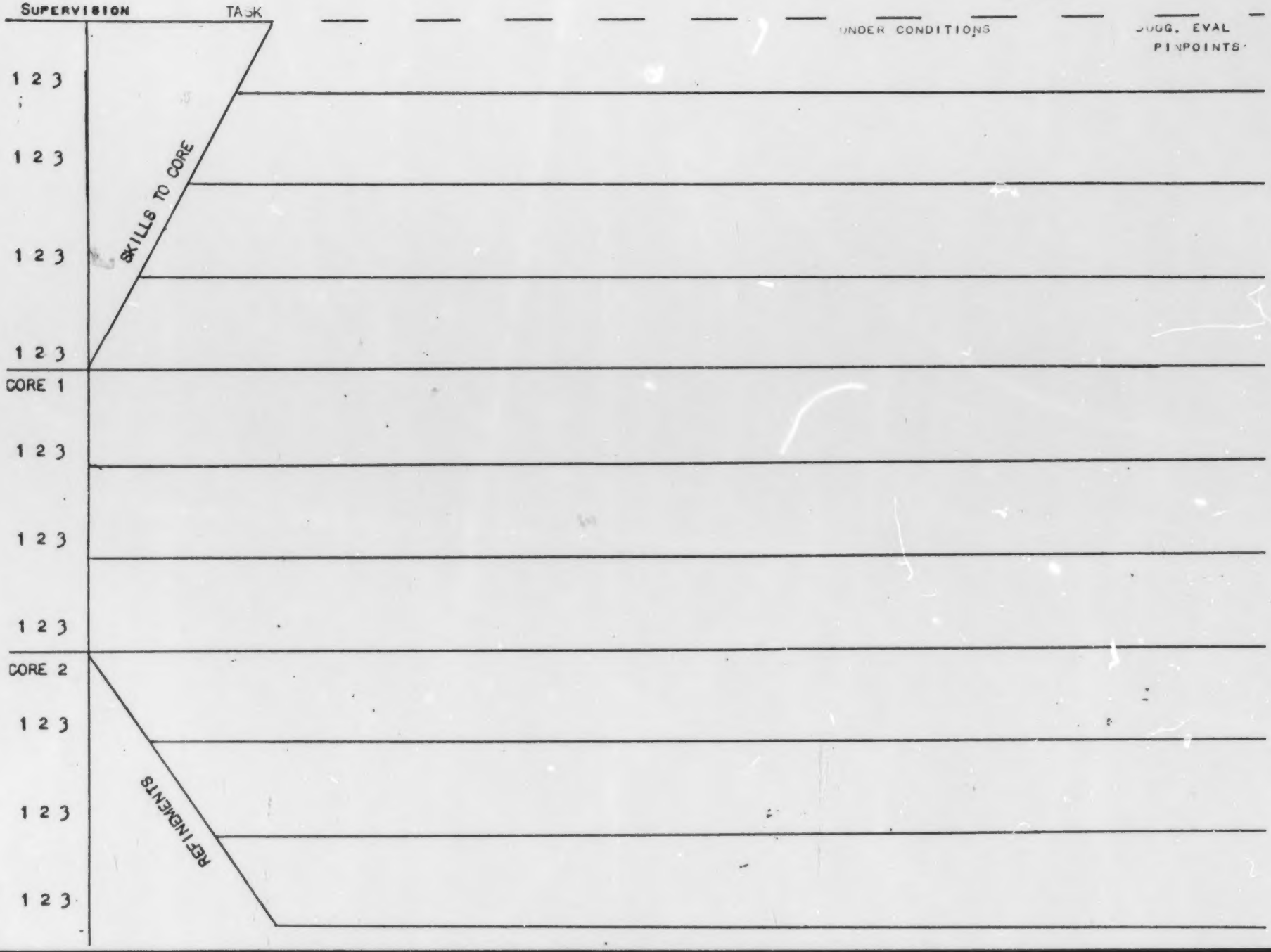
1) aide the instructor in task analysis and goal setting.
2) provide a graphic picture of the various tasks and the levels through which the child proceeded.
3) serve as part of an overall framework for evaluating the child's growth.
4) allow the child to achieve maximum progress with a flexible structure.
5) Provide a series of achievable (short term) instructional goals leading to gainful "real life" activities.

The basic frame with instructions for its use and implementation is provided in this chapter. The frame is behaviorally based, outcome oriented, and adaptable to specific criteria referencing. This does not mean that to use the frame successfully, one need have extensive training. Some skills in writing behavioral objectives and specifying learner outcomes are necessary. The important qualification in the use of the frame is the teacher's commitment to learner outcomes. As Lindsley pointed out in 1964, "Children are not retarded... In fact, it is modern science's ability to design suitable environments for these children that is retarded."[5]

There are three basic skills necessary for full implementation of the Supervision Core Frame. These are the ability to chart, knowledge of the frame and its application, and familiarity with needs assessment and goal setting in terms of behavioral outcomes. The purpose here is to deal with the use of the frame specifically since the charting will be treated in the next chapter.

It is necessary to view the Supervision Core Frame as consisting of four interdependent parts. That portion of the frame which contains the two cores is the starting point for any task. Once either of the cores, test condition or real life situation, has been specified the teacher can proceed to construct the complete task through all of the necessary levels. In this project, it was easier to fill in the test core first. The guiding principle was that if the child could not achieve to a real life situation for each test core, then the instructor had not selected an adequate activity or completed an appropriate task analysis. The activity was <u>not</u> taught, however, until the real life situation had been defined. After writing in the test core, e.g. Activity: Sweeping - First core - Learner sweeps 100 square feet acceptably and sweeps dirt into dustpan on verbal gestural written command

SPRING, 1972 S.P. RESOURCE MT. DERIVATION
L. WOOD



under _____ conditions. The teacher is now free to expand on the frame. If the first core were chosen, there were fundamental skills that led to this core. If the second core were chosen, one must also find some way of evaluating the learner's ability to perform the given task - the first core. In outline form, the core selection and writing would follow the sequence provided below:

1) Instructor and/or learner selects core objective.

A) If test condition (Core I is selected), the instructor expands the test condition with those items necessary to have the task/skill completed in a real or relevant manner. For example, in sweeping, the steps prior to the second core or real life situation involve the addition of those activities (locating and returning tools, sweeping in an empty room) which are essential to performance of the task in a real life situation. The second core or real life situation is then expanded and refined. Here, the learned is capable of performing the task and meeting the criteria for the specific activity. Refinements in this case are additional skills which make the learner a more independent worker.

B) If the second core is chosen (the real life task) the instructor and/or learner must develop a test situation which is an integral part of the real life condition.

2) The next operation is the muscle on the skeleton of the basic activity cores. After core selection, the skills which lead to the first core are defined and specified behaviorally. These skills should be broken down in to a basic arrangement that is a) refined enough for any of the population group the instructor might deal with, b) open enough for the more advanced child to proceed quickly up to his maximum, and c) flexible enough to be further refined and developed to adapt to any child's needs.

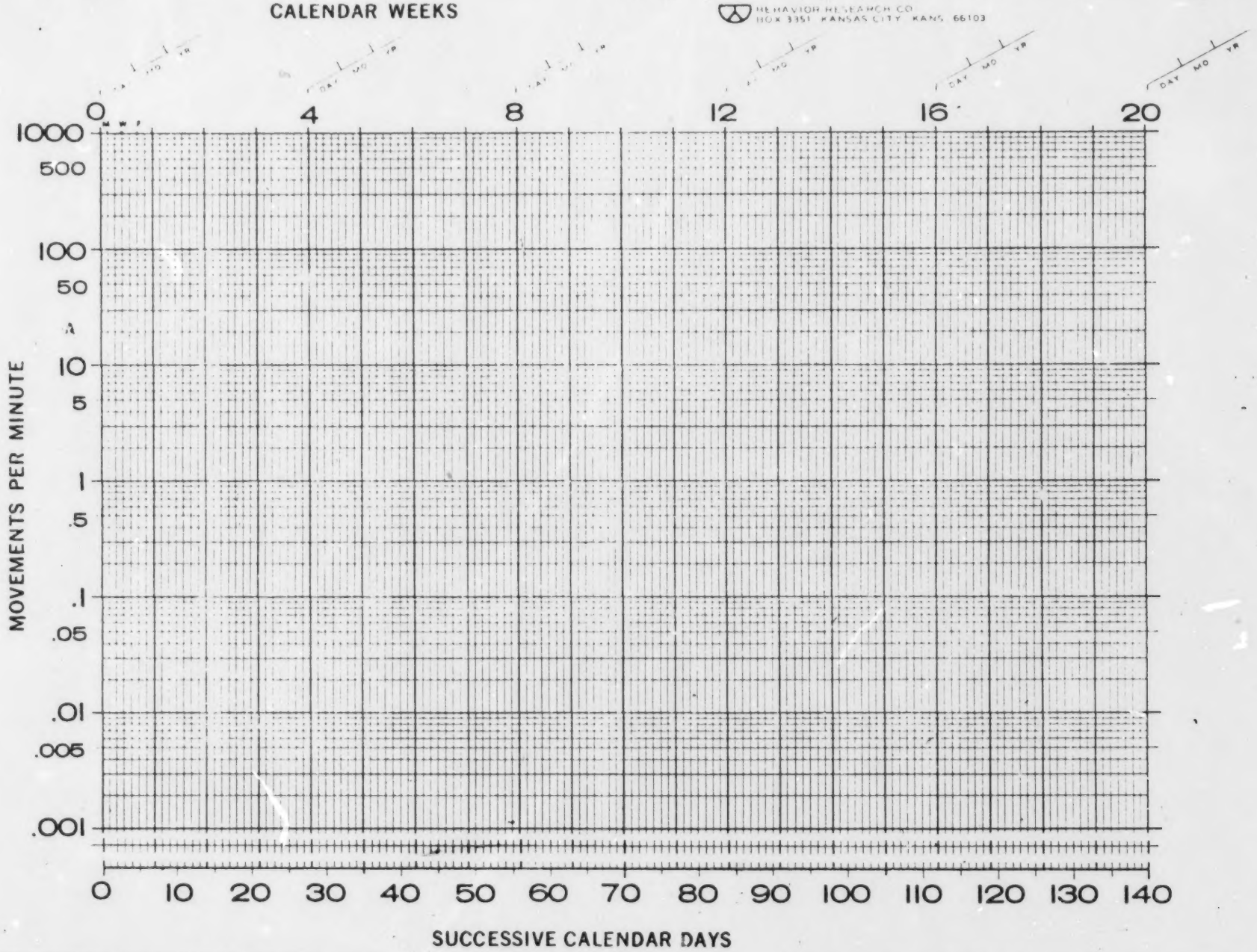
Among the refinements selected in this project for the second core were:

a) Increasing the work load.
b) Having the learner inspect the quality of his product or results of his job.
c) Completion of finished quantities of materials.
d) Adjusting machinery in case of minor breakdowns.
e) Supervising other children on the same activity.

3) The fourth section of the frame deals with the supervisory evaluation for each level of the activity unit. The recording of Supervisory Interventions or "prods" as a means of evaluating progress was explained earlier.

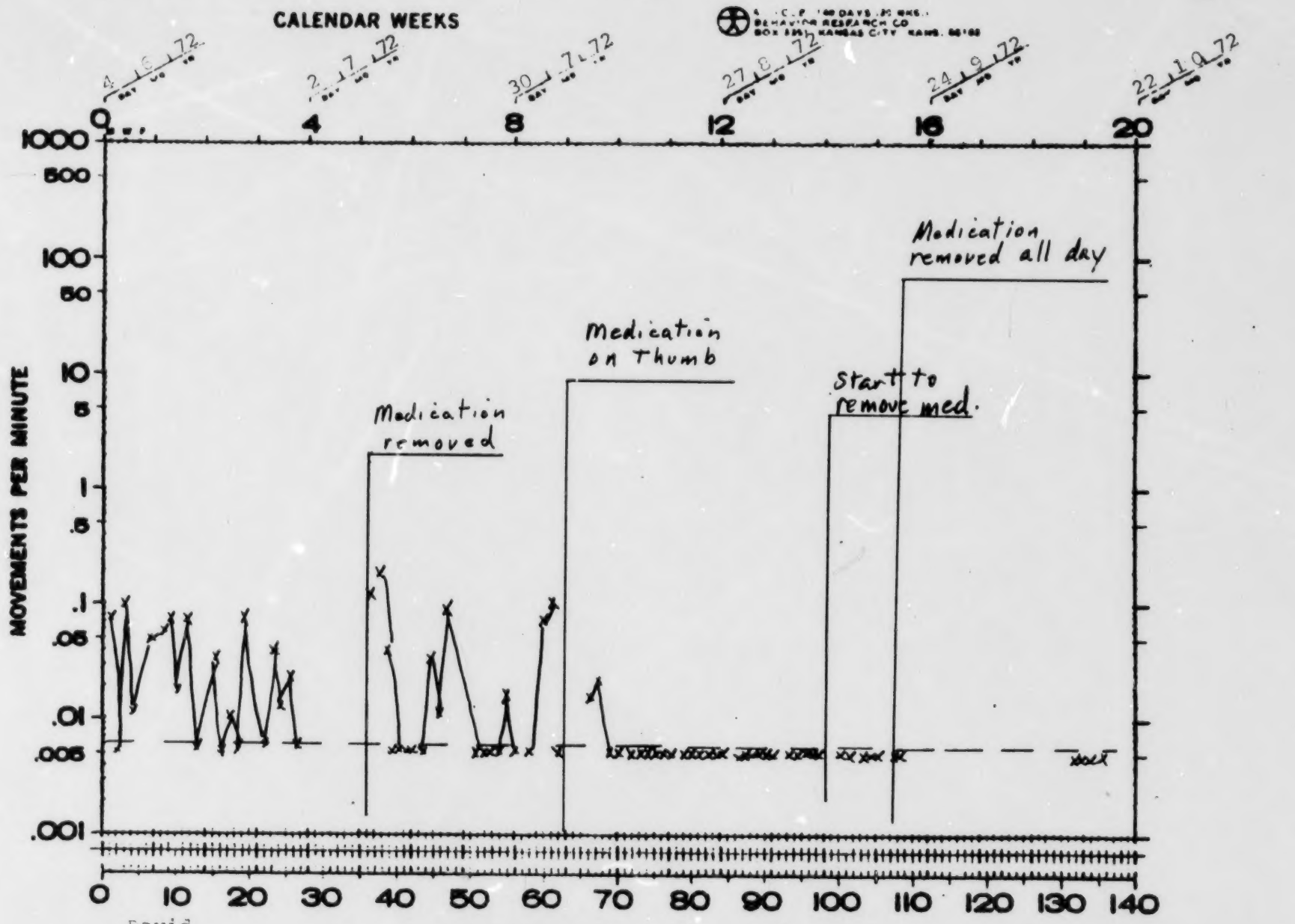
As will be remembered, the continuum of supervision was:

1) Supervision plus instruction required for completion.
2) Supervision only required for completion.
3) Task completed successfully under minimum supervision.



SUPERVISOR	ADVISER	MANAGER	BEHAVER	AGE	LABEL	MOVEMENT
DEPOSITOR	AGENCY		CHARTER			

The child's progress through each task level is judged by recording the Supervisory Interventions or "prods" on Precision Teaching charts. When the child reaches grade "three," the amount of supervision required for the conditions is at the minimum, the next step is introduced. Combining the frame with the charting procedures offers an effective and flexible system of task development and evaluation. By matching growth rates on the chart to the task level at which the learner experiences difficulty, the instructor can respond quickly to the specific needs of the children. The use of the double core with its built-in demand for a "real life" aspect of any task, provides at least partial assurance that the program remains relevant. Emphasizing the growth of independence through the planned reduction of supervision and concentrating program format on learner outcomes seems to help ensure that maximum learner growth remains the primary objective in a prevocational curriculum.



SUPERVISOR	ADVISER	MANAGER
	David Freschi	Penny Fable

DEPOSITOR	AGENCY
	Benhaven

BEHAVER	AGE	LABEL	MOVEMENT
Harry	13	NI	sucks thumb

CHARTER
Penny Fable

Figure 2

The dots or x's are entered on the chart where the day and the frequency lines meet. The dots and/or x's are connected by a straight line. When behavior is not counted or charted but may occur, the connecting line goes across the ignored day. If there is no opportunity for the behavior to be observed (e.g. no school) the days are not connected. When a change is made in the child's program, a heavy vertical line is drawn between the day the change was introduced and the preceding day.

The data recorded on a logarithmic chart provide us with an accurate and complete picture of the individual's progress. Subtle changes in rates of growth, the daily frequencies, cycles and time factors provide us with an efficient tool for evaluating program effectiveness in a format which is quickly communicable to those concerned.

Rates of growth are graphically indicated on the chart by a heavy line drawn through the data. This line (called the celeration line) is the "line of best fit" and summarizes the general trend of the behavior. The slope of the line and its direction are critical factors in examining the data.

Fig. 2 is an illustration of a program to reduce Harry's thumbsucking. Harry, his classmates, and teacher worked together over a twenty week period to manage this behavior. The change procedure involved the use of a commercial preparation placed on Harry's thumb to discourage thumbsucking. The teacher and Harry's peers assumed the responsibility of counting each time the behavior occurred and reminded him that a notation was being entered on the count sheet. At first (see chart), Harry's thumbsucking bounced considerably in frequency but showed a downward trend. After the sixth week an attempt was made to eliminate the preparation. There was an immediate jump in frequency of thumbsucking despite the downward trend in this behavior. After 4 weeks, the medication was reapplied and Harry quickly dropped to zero thumbsucking during a school day. The teacher maintained this procedure for approximately 4½ weeks and then started to remove the medicine for a brief period of time. No increase in occurrence of thumbsucking was evident. Therefore, the application was removed completely and thumbsucking remained low and no longer interfered with Harry's learning.

The primary purpose of the daily behavior chart in this project was for recording the rate of Supervisory Interventions by the instructors and aides.

Supervisory Interventions (SI's or Prod's) were defined as any intervention, verbal or nonverbal, instructional or disciplinary that the instructor was required to employ to bring the learner to successful completion of a task or activity.

The number of Supervisory Interventions required before a child could complete a task at an acceptable level was counted and charted by the instructor. On several occasions, the charts were shared with

selected children. It would be ideal to have the child record his own prod frequency and to teach the child to recognize any danger signs suggestive of over dependency upon the instructor. This holds promise for reducing support to minimum levels, freeing the professional for more pressing needs and allowing the learner to develop a sense of independence. Illustrative charts of the various children in several of the activities associated with the project are included in the following chapter.

The use of precision teaching may be applicable for those handicapped individuals who are able to work outside of a sheltered environment but who may continue to require support. With the rapid communication potential of the chart, a case worker, employer, or the handicapped person, might be able to spot potential trouble before it becomes a major problem. This would allow for remedial intervention and might do much toward enhancing successful placement.

CHAPTER VII
RESULTS

There are two major divisions in this chapter. The first consists of representative daily behavior charts for several of the children who took part in the study. Charts have been selected from the prevocational area and other facets of the children's programs so that a more complete picture may be seen of the children's growth.

The charts have been organized in the following manner:

1) The children's individual charts with comments are treated first. The explanation of the graphic data is included in the text.
2) The parents' charts on the children's carryover are included next.

The second division includes the statistical results relative to the group. The statistical data and analyses are presented in the order in which the three phases were given - ADL, Production-Assembly, and Service-Maintenance.

Precision Teaching Charts

Fig. 3 - This chart provides a picture of Ronald's progress on two levels of a task in the Service-Maintenance phase. The task is cleaning a wall and the pinpoint being counted is the number of Supervisory Interventions needed for Ronald to complete the task at any given level. As shown in the chart, Ronald required no prodding at the E level of this task. The F level involved a reduction in structure (the wall space was larger), and the use of a ladder was required. It became evident immediately that prodding was needed. During a two and a half week period, prods were reduced from approximately 1 per each 2 minutes to zero prods per minute. By using the continuous measurement of the chart, the instructor had a picture of growth and a clear indication of when to change the child's program. With Ronald, the instructor could also see just how much of a reduction in structure Ronald was capable of tolerating at that point in time.

Fig. 4 - Harry's first chart is from the prevocational area. The chart gives a graphic representation of Harry's progress on two levels of a Service-Maintenance task cleaning a wall (vertical surface). Again, the pinpoint was the number of Supervisory Interventions required before Harry could complete the particular level of the task independently. As can be seen from the chart, level D did not pose much of a problem for Harry. This level is highly structured and involves working in a limited area. The frequency of prodding dropped quickly from almost 1 per minute to zero. This was the instructor's cue to introduce the next level. Here, fewer prods were needed initially (1 per 2 minute period) but it took slightly longer to bring the number of prods to zero. This is due perhaps to the fact that with each successive level, there is a reduction in the structure of the task and/or an increase in its complexity.

Fig. 5 - This is Sam's chart on the Supervisory Interventions required for three levels of sweeping. Levels E and F presented no problems for Sam. His receptive language is high and structure for these two levels was well within his capabilities. The G level, sweeping in a

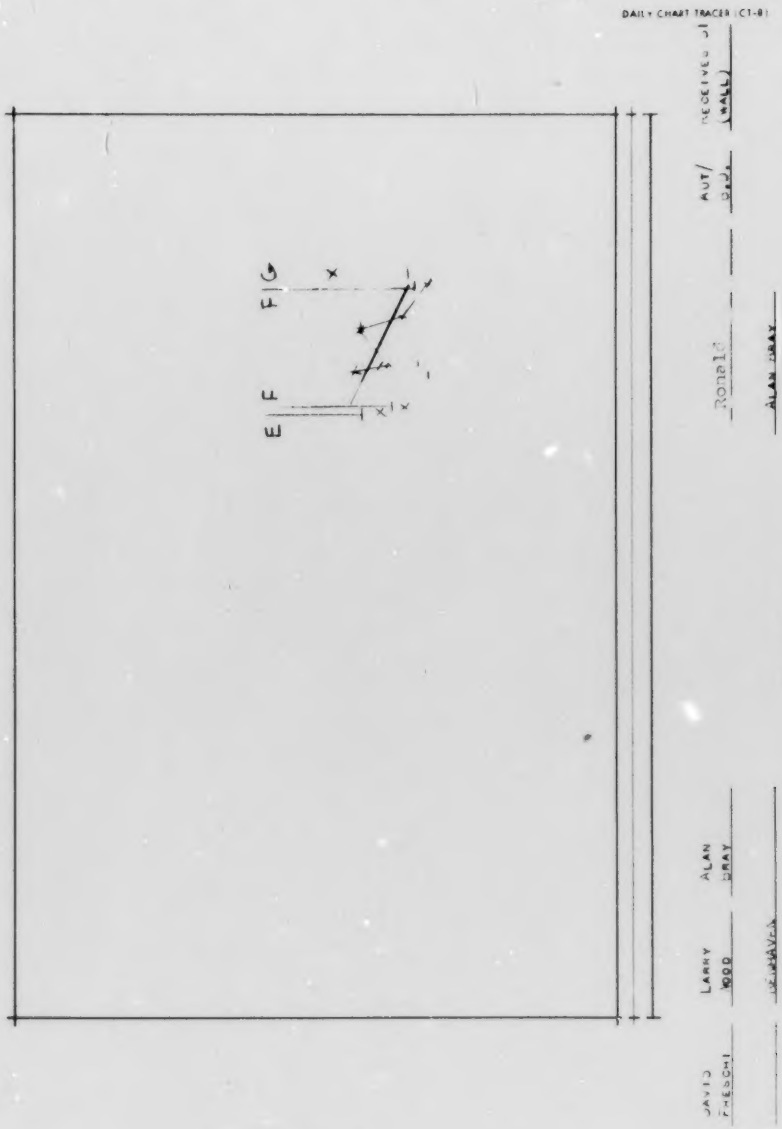


Figure 3

furnished room, was difficult for Sam because of the distractions. The prods jumped to 1 every 2 minutes on the first week. The next count was at 0 and when checked 2½ weeks later, the necessity for prodding was still at zero. This type of chart with the very rapid progress from level to level indicates to the instructor that this task is too easy for Sam. He should perhaps be challenged more. Fig. 6 on Sam illustrates his progress in learning valve assembly, a task included in Phase III. Level F, in which the valve is partly assembled presented few difficulties and the Supervisory Interventions were reduced by about 80% per week. The G level which involved the complete assembly of the valve presented far greater difficulty for Sam. Prods remained high at this level and the instructor was clearly alerted to maintain close supervision and to implement change.

Fig. 7 - The chart gives a picture of Ralph's progress through five levels of a Service-Maintenance task - cleaning a sink. As can be seen, levels C-E posed no difficulty for Ralph. Level F required motor planning and the ability to switch from a horizontal surface (the bottom of the sink) to a vertical surface (the sides of the bowl). This level proved a stumbling block and supervision increased from 1 prod per 4 minutes to 1 per minute before Ralph learned the task and was able to perform with minimum supervision. Once he had learned to alter his movements, the chart revealed that the next switch (back to horizontal) delayed Ralph for only a brief time. Initial prodding was lower also for every 3 minute period.

Ralph's difficulty in performing activities which involved judgment were clearly shown in Fig. 8 on operating a copy machine (Xerox 2400). Here on levels D & E which required purely rote structured activity, Ralph had no difficulty. Level F involved the loading of paper with the variables of paper size, placement, and sequencing of the loading tray operations. This became a five and a half week learning session for Ralph. From the information on the chart, the instructor adjusted Ralph's program on at least two levels simultaneously. Ralph was given less difficult tasks and at the same time, he was provided instruction which would develop his ability to respond appropriately in judgmental situations.

Fig. 9 shows Doreen's progress on the same task - operating a copy machine. The C level required the child to place the original copy in the proper position in the machine. Doreen did not generally attend to fine details in most of her activities. The C level of this task demanded a moderate amount of precision. It required seven weeks for Doreen to get through this level. It can be seen from the progress on the next two levels that the effort to get through level C was warranted in that levels D & E posed no difficulty at all for Doreen.

Fig. 10 - This is illustrative of Lynn's progress on the copy machine.

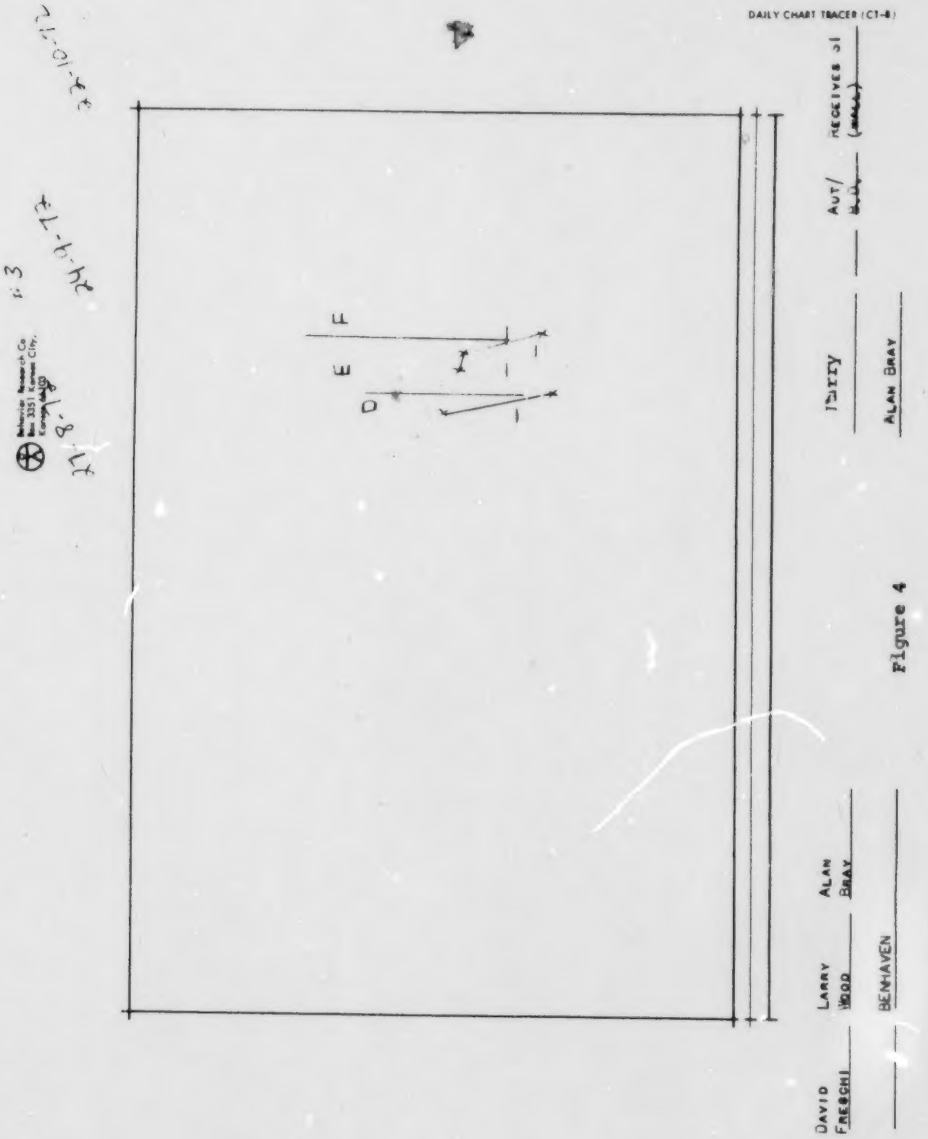
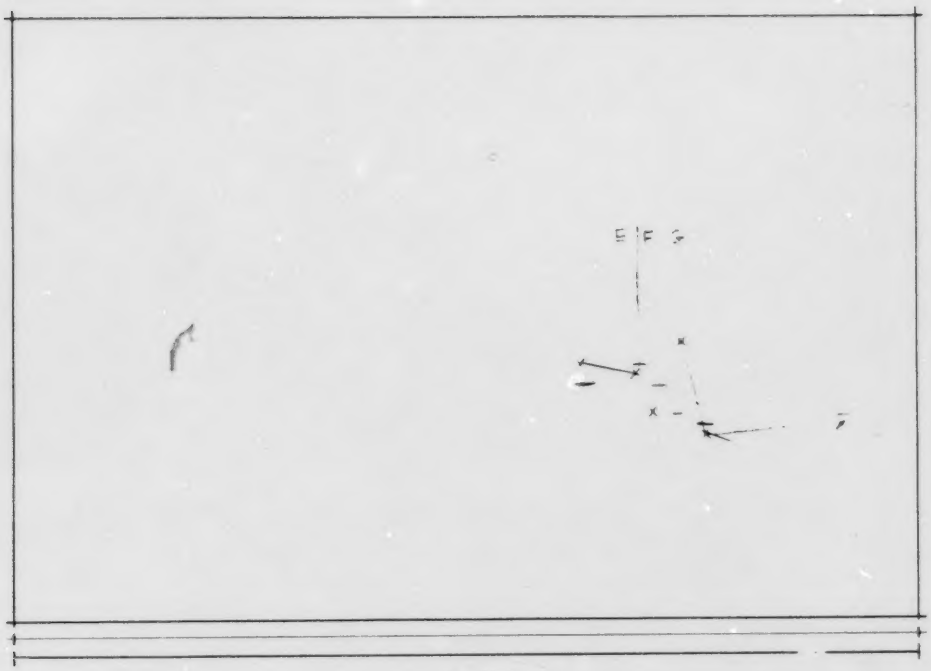


Figure 4



JAVID FRESCHI | LARRY WOOD | TOM SOBOCINSKI

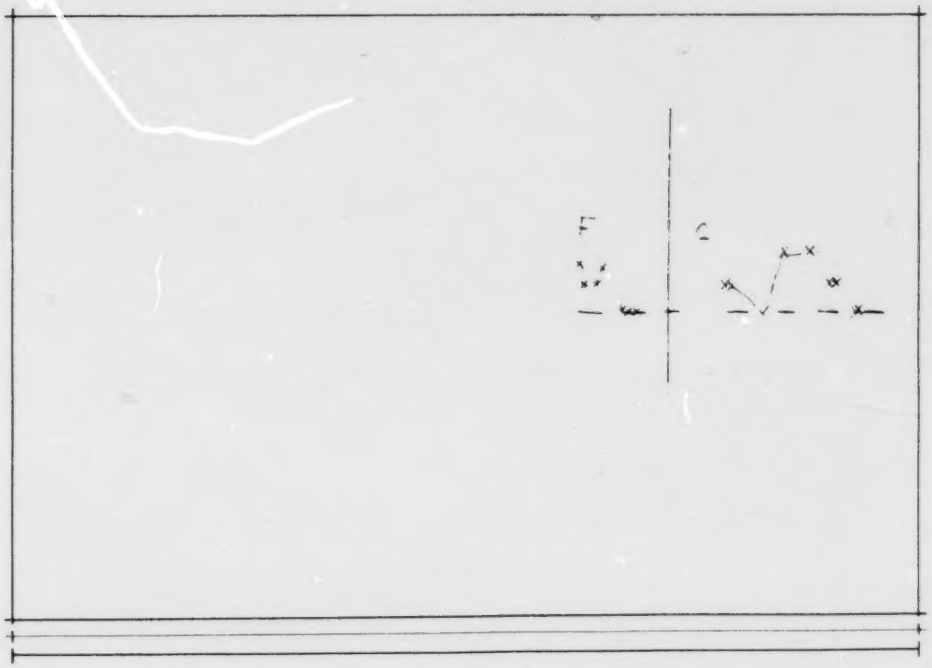
BENHAVEN

Sam | AUT/B.J. | RECEIVES 31(SWEEPING)

TOM SOBOCINSKI

DAILY CHART TRACER CT-81

Figure 5



JAVID FRESCHI | LARRY WOOD

BENHAVEN

Sam | 30/AUT | 31

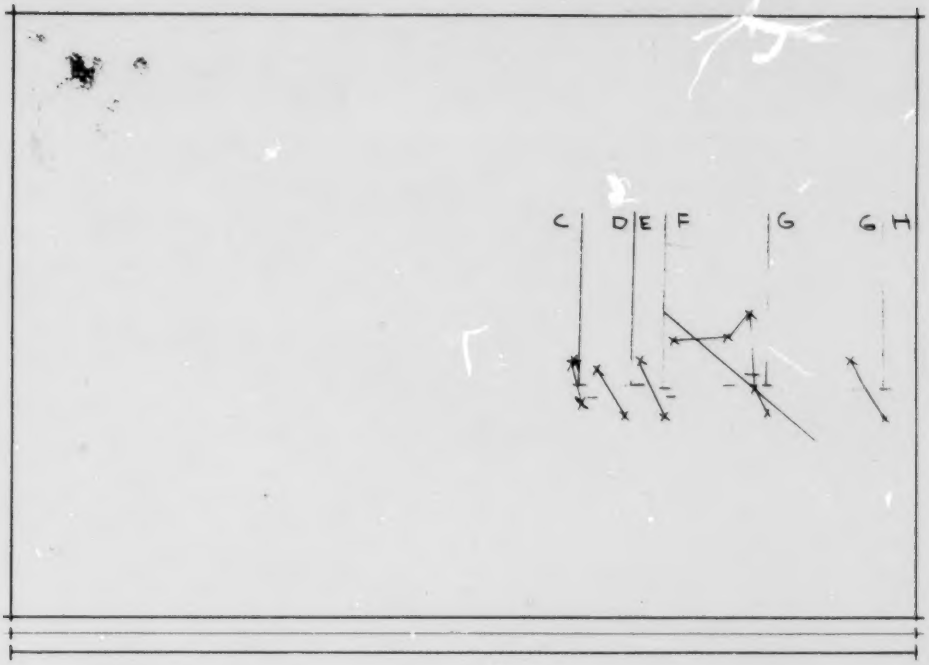
LARRY WOOD

VALVE ASSEMBLY CT-81

Figure 6

Behavior Research Co. Box 3351 Kansas City, Kansas 66103 #6

27-8-72 24-9-72 22-10-72

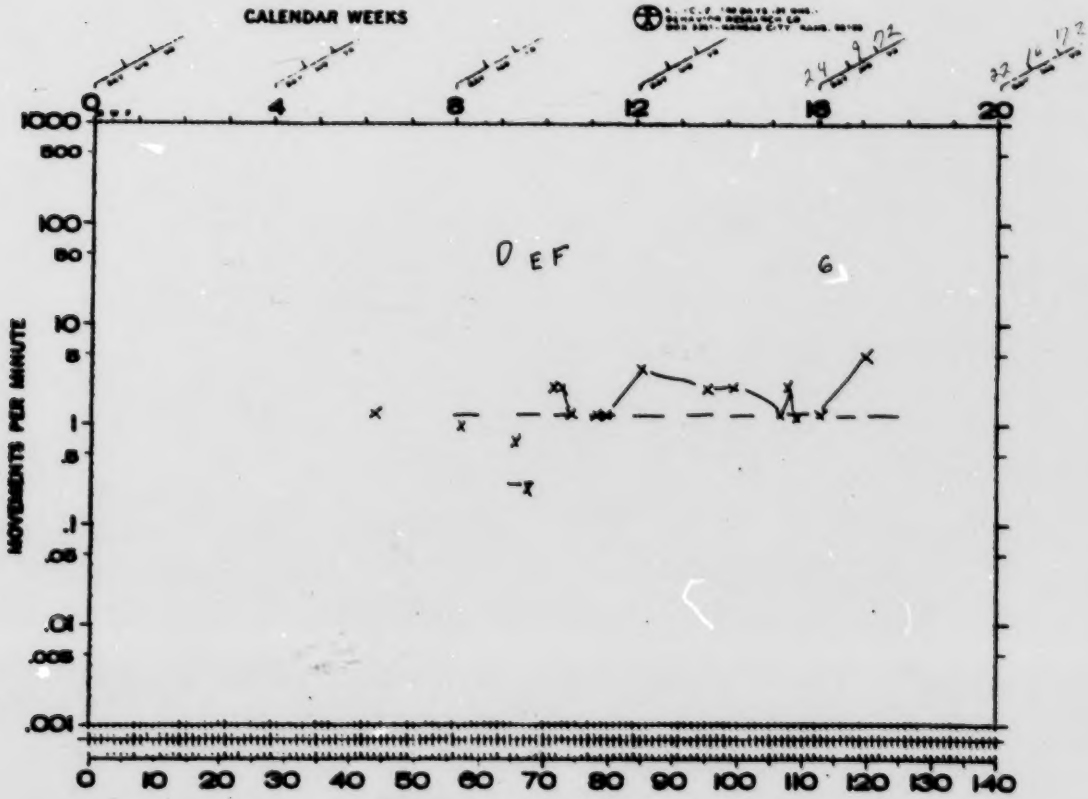


DAILY CHART TRACER (T-81)

JAVID FRESCHI | LARRY WOOD | LARRY WOOD | Ralph | AUT/ | RECEIVES

BENHAVEN | LARRY WOOD

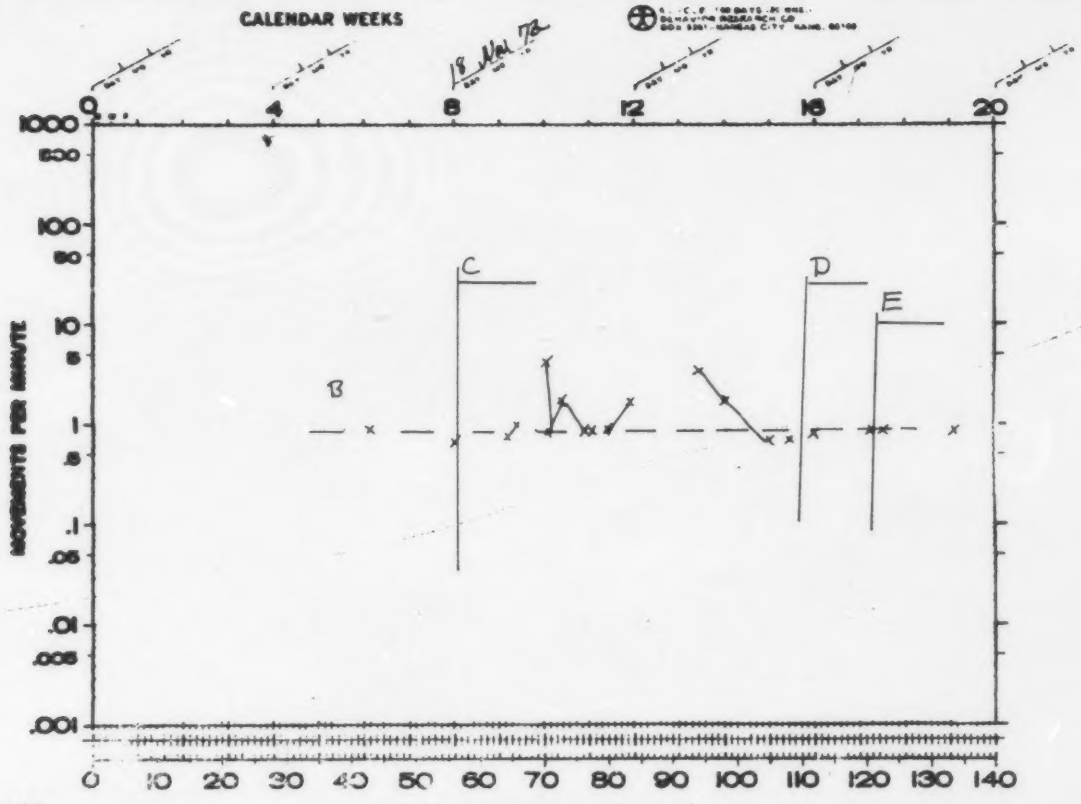
Figure 7



David Freschi | Larry Wood | Ralph | Aut. | SI

SUPERVISOR | ADVISER | MANAGER | MANAGER | AGE | LABEL | MOVEMENT

Benhaven | Larry Wood | Xerox



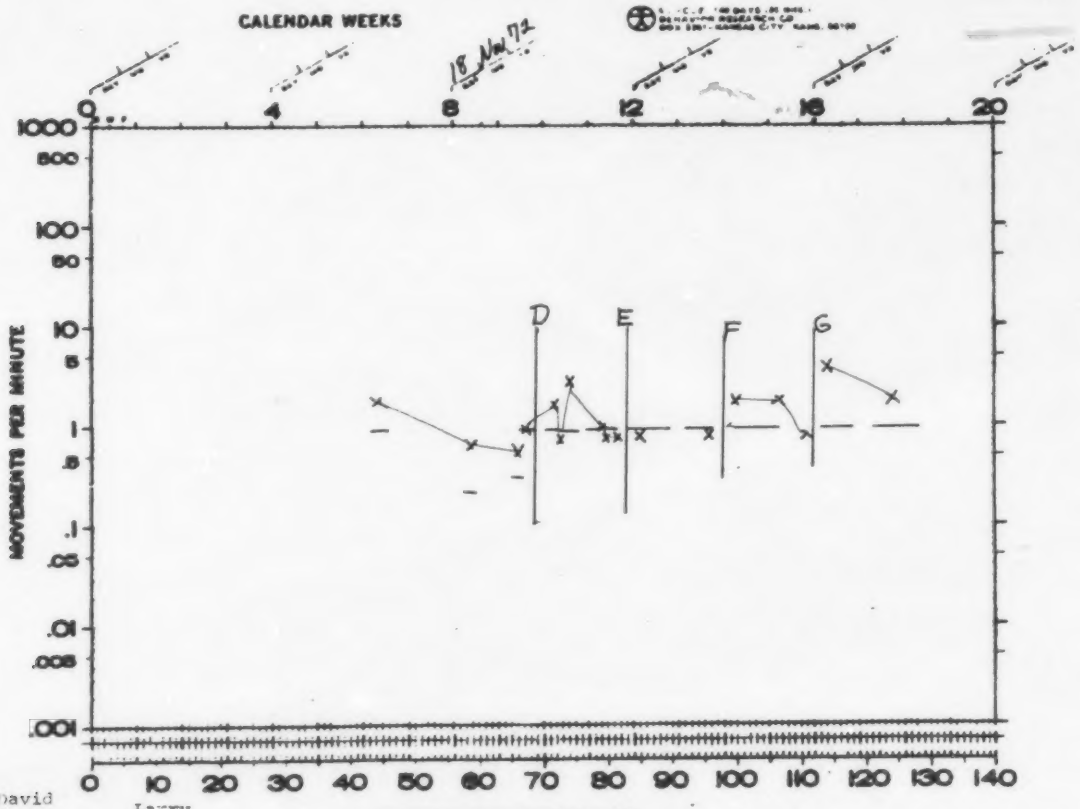
avid
Freschi — Larry Wood
SUPERVISOR — ADVISER — MANAGER

Benhaven
DEPOSITOR — AGENCY

Figure 9

Doreen — — — SI
BEHAVER — AGE — LABEL — MOVEMENT

L. Wood
CHARTER



David
Freschi — Larry Wood
SUPERVISOR — ADVISER — MANAGER

Benhaven
DEPOSITOR — AGENCY

Figure 10

Lynn — — Aut. — SI
BEHAVER — AGE — LABEL — MOVEMENT

Larry Wood — Xerox
CHARTER

The picture presented is one of steady gains through each level. Prods never exceeded 4 per minute and could be steadily reduced after the introduction of each new level. There were, up to the G level, no skills which Lynn could not attain after a reasonable amount of instruction.

Fig. 11 - The chart illustrates one of Mark's difficulties that he had in integrating successfully learned parts of an activity into a whole. In this Production-Assembly task (valve assembly), Mark had no difficulty until he reached the G level which required the complete assembly process. Here the number of prods rose to 4 per minute and did not reach zero after four weeks. The chart did show that the complete task was being learned in that the prods were dropping at a rate of 40% per week.

Fig. 12 - This chart shows Mark's growth in an area that is often typical of the population under consideration - eye-contact. Lack of eye contact with people or task is an interfering behavior. This chart also shows the effectiveness of involving the learner in the charting procedure. Mark assisted in counting his own frequency of eye contact. The dots indicated spontaneous eye contact and the x's denoted eye contact that the instructor had to prompt from Mark. The trend was highly encouraging. Spontaneous eye contact increased by 5% per week for the 13 charted weeks, and the necessity for prompted contact fell off at approximately 12% each week. Mark's self monitoring plus consistent reinforcement from his teachers was the primary procedure employed to increase Mark's eye contact to more acceptable levels.

Fig. 13 - This chart provided the instructor with valuable insight regarding Dexter's progress and on techniques for working with him. On the first level (A) of this Service-Maintenance task, mopping, the chart showed a rapid deceleration in the necessity for prods. It was evident that data was not being recorded often enough and too much time was taken on a task level that posed little difficulty for Dexter. On the B level, it was noted that supervision was on the rise. The instructor, after observation, decided that the lack of progress was due to resistance and not to Dexter's lack of ability. The child was removed from the pre-vocational room and not allowed to enter for the remainder of the day. Dexter became very upset by this prohibition. The next day his prods were at zero and as can be seen from the chart, the next three levels of the task presented no problems for Dexter.

Fig. 14 and 15 - These charts are illustrative of Stan's performance on two cleaning tasks. These data provided the instructors with a clear picture of one of Stan's problems, inability to successfully function on a task without clearly defined visual limits. On Fig. 14, cleaning a table, Stan progressed steadily from levels D through F. At the start of each new level fewer prods were also required. At the D level, he was prodded once per minute; the E level was down to an initial frequency of 1 prod every 2 minutes and at the F level, he required only 1 per 3 minutes. In Fig. 15, cleaning a wall, a different picture at the F level was evident.

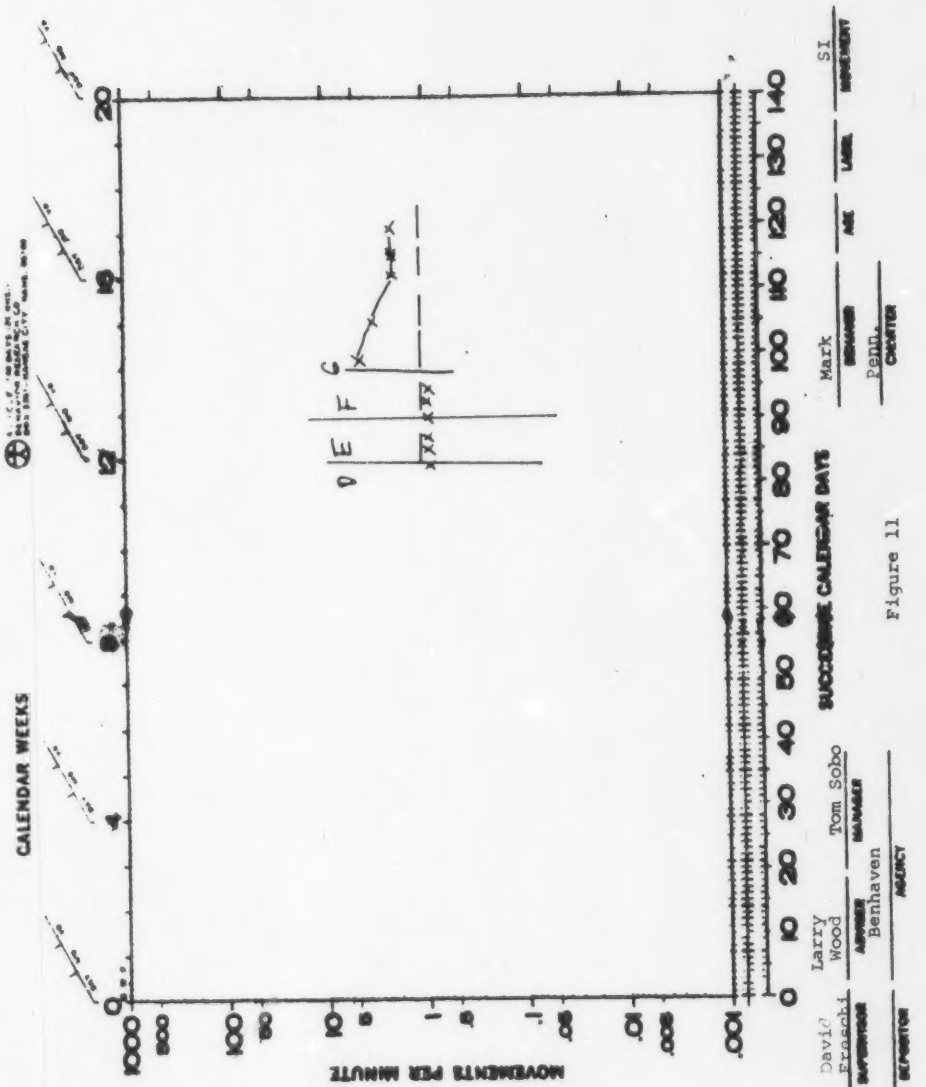
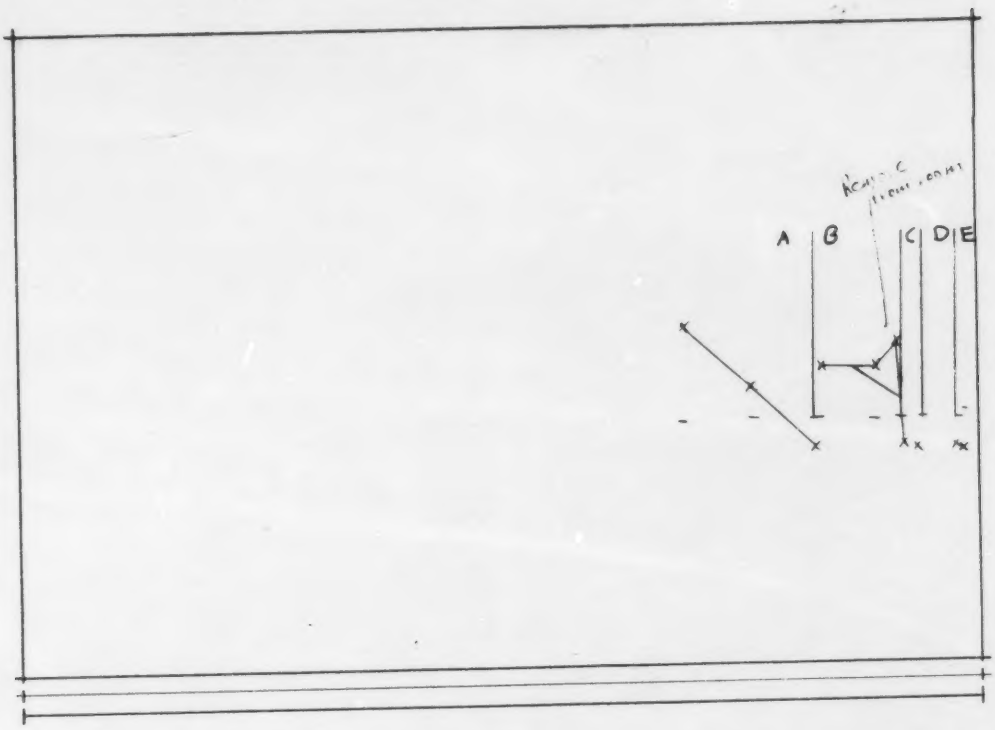


Figure 11



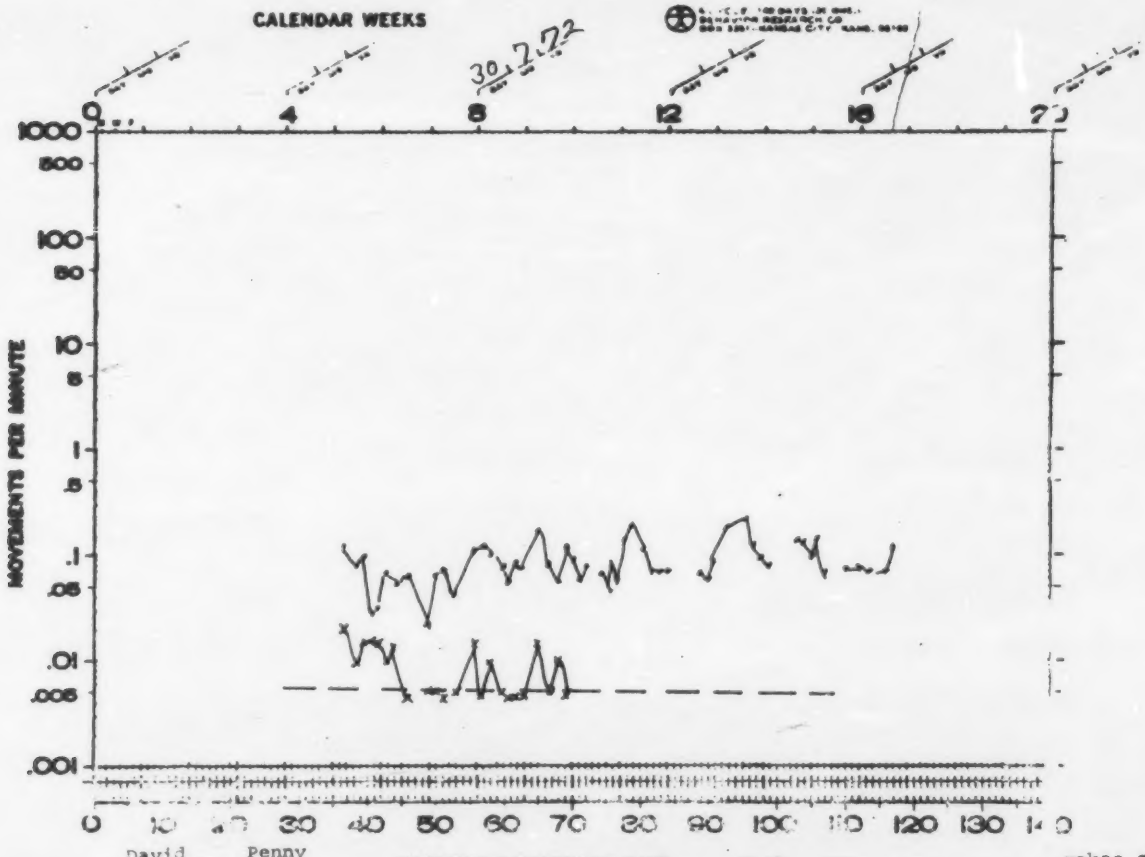
David Freschi | Larry Wood | Larry Wood

BENHAVEN

Figure 13

Dexter | 14 | Aut/ B.D. | Receives SI(mopping

* Larry Wood



David Freschi | Penny Fable | Mark | makes spontaneous eye contact

SUPERVISOR | TRAINER | BEHAVIOR | AGE | LABEL | MOVEMENT

Benhaven

Figure 12

Penny Fable

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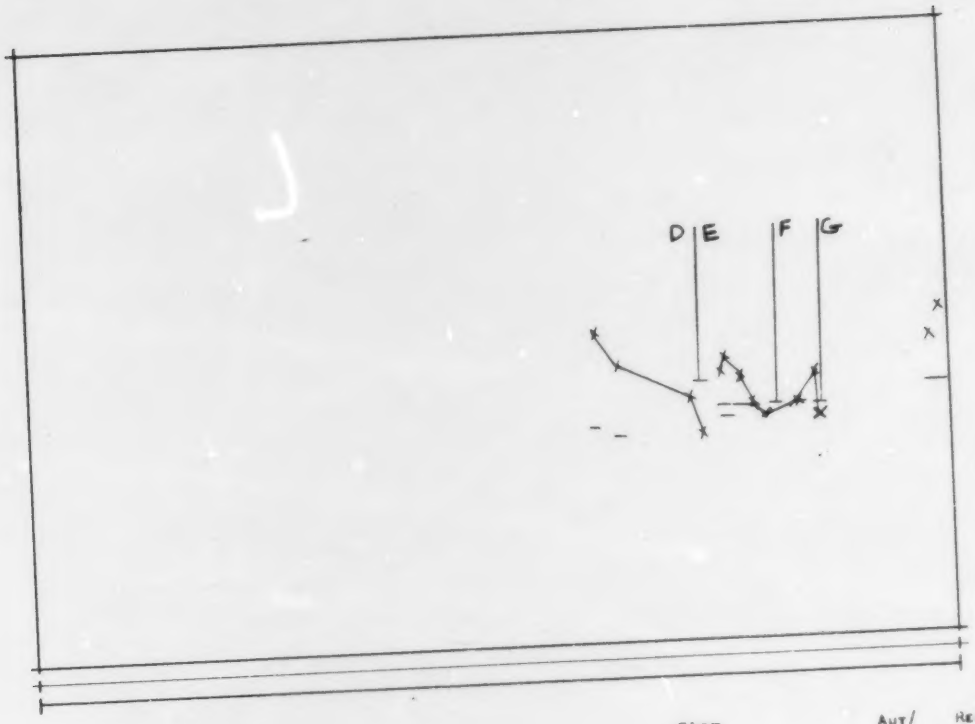
27-8-72 24-9-72 #B 22-10-72



DAILY CHART TRACER (CT-8)

DAVID FREDCHI | LARRY WOOD | ALAN BRAY

BENHAVEN

Stan

ALAN BRAY

AUT/ B.D. | RECEIVES SI (TABLE)

Figure 14

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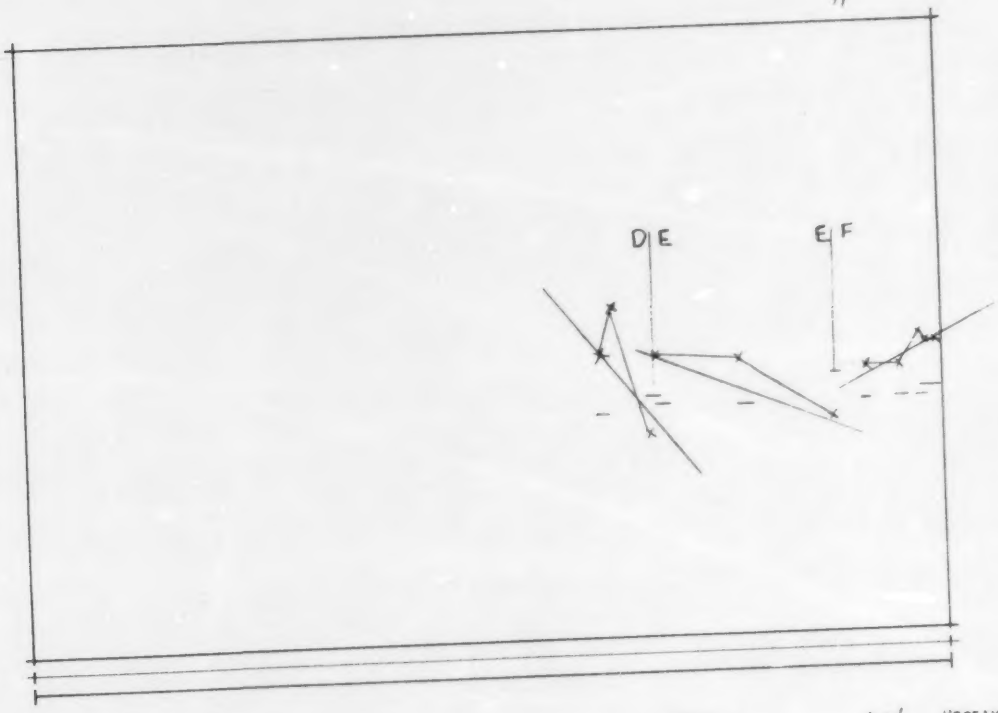
Kansas 66103

27-8-72 24-9-72 #12 14 22-10-72



DAILY CHART TRACER (CT-8)

DAVID FREDCHI | LARRY WOOD | ALAN BRAY

BENHAVEN

Stan

ALAN BRAY

AUT/ B.D. | RECEIVES SI (WALL)

Figure 15

Here, the prods were rising sharply at a rate of approximately 50% per week. Upon examining the two tasks, cleaning a table and cleaning a wall, an important difference was discovered. The table has clearly defined edges and provides intrinsic structure by virtue of its boundaries. A large wall, on the other hand, does not provide such perceptual limits. The difference in Stan's two charts, signaled the instructor to perform a more thorough task analysis and to delimit the visual field so that Stan could progress in wall cleaning.

Fig. 16 - This chart gives a picture of Stan's slow but consistent growth over a 20 week period of time. The chart shows Stan's correct and incorrect signs for words associated with Activities of Daily Living. Growth in the correct use of sign and vocabulary was about 5% per week. Errors appeared briefly when new words were introduced but quickly disappeared as Stan learned the new word.

Fig. 17 - This is Bob's chart on four levels of a sweeping task. Bob broke down on the G level of this task-sweeping in an actual room with furniture and distractions. This then became the level at which his instructor concentrated his efforts.

The parents were given a checklist for eadh ADL task. The tasks were broken down into steps and thepparents were asked to check off those steps that the children required assistance with and those that they could perform independently. The checklists were returned on a weekly basis to Benhaven where the total number of steps performed with help at home were recorded. After a four week period, a training session was held for the parents. Each parent was given suggestions and guidelines for working with their child on those ADL activities which were presenting difficulties for the child.

Parent Charts Figs. 18-22 illustrate the effectiveness of the training session for the parents and the carryover of ADL skills to the home. The heavy vertical line, after the fourth week, designates the parent training session. In each of the give ADL activities there was a significant deceleration in the assistance which the child required to complete the task.

The charts given here were intended to illustrate some of the uses precision teaching was put to in this project. The charts provided data that was quickly available, graphic and accurate, thereby, enabling the instructors to respond as soon as need for change was indicated. Additional charts representing the children's performances in several areas have been included. The reader may obtain a fuller picture of the children and their overall growth.

Statistical Data

The statistical tables provide thepertinent data regarding the following:

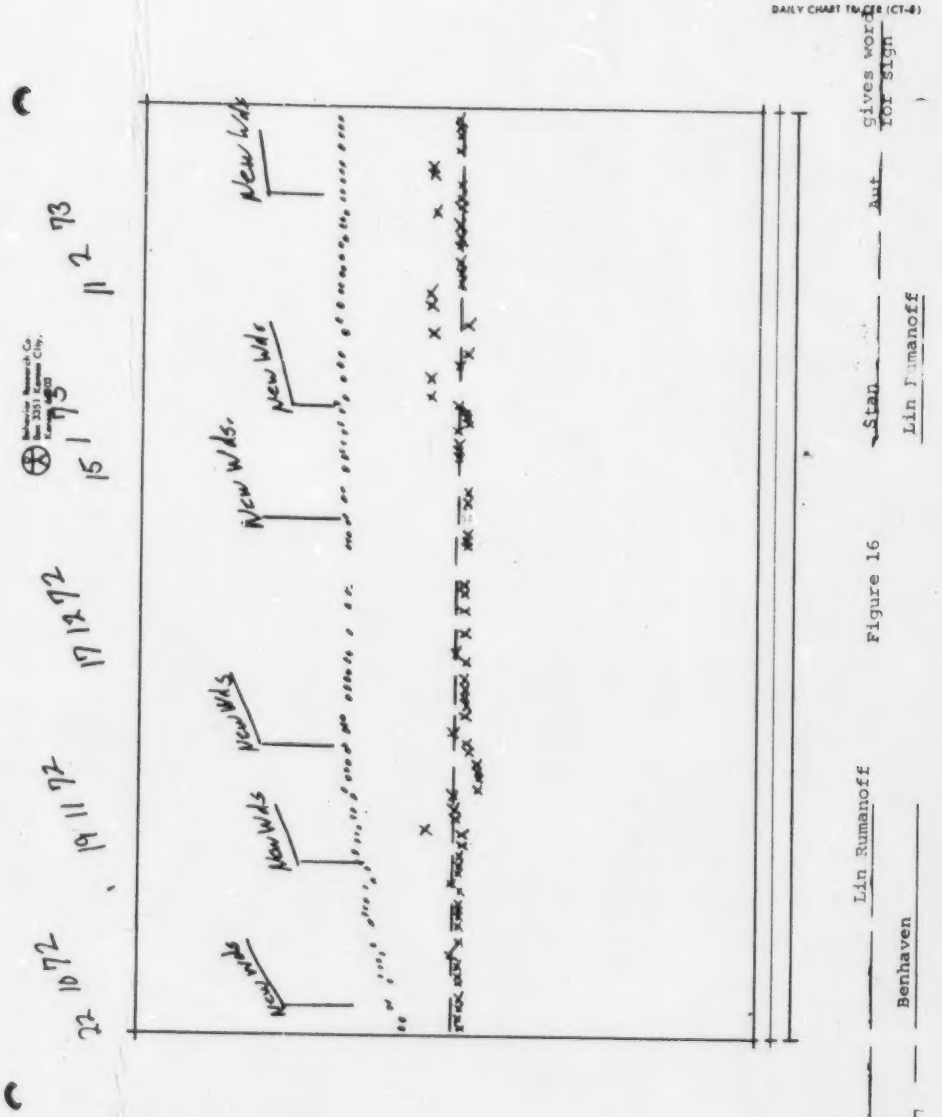


Figure 16

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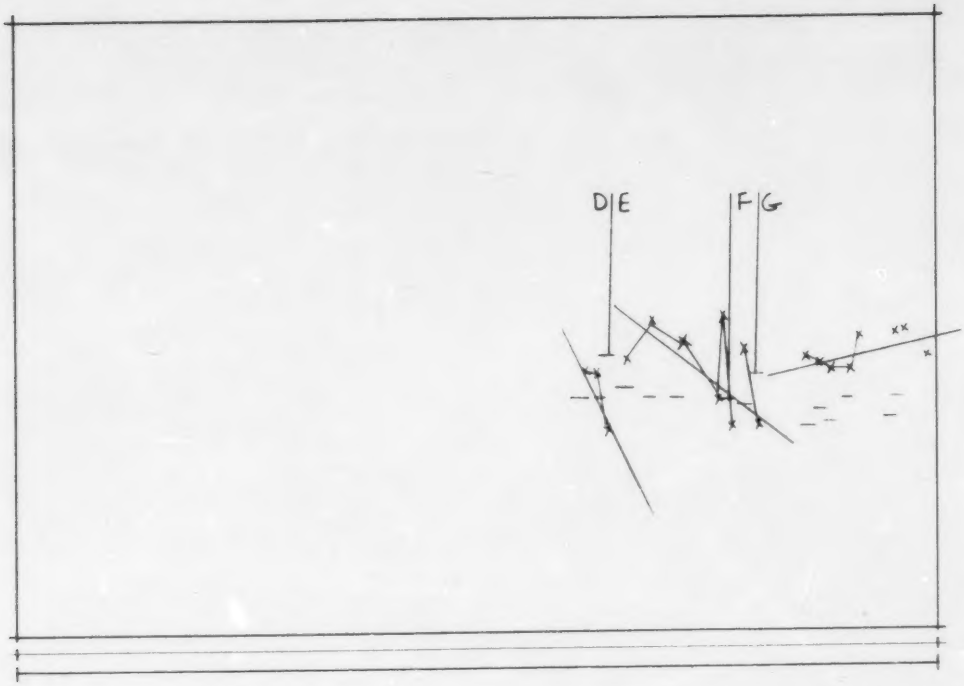
27-9-72 #17 24-9-72 22-10-72



DAILY CHART TRACER (CT-8)

DAVID FRESCHI | LARRY WOOD | LARRY WOOD | Bob | 17 | AUT/ B.U. | RECEIVES DI (SWEEPING)

BENHAVEN | LARRY WOOD

Figure 17

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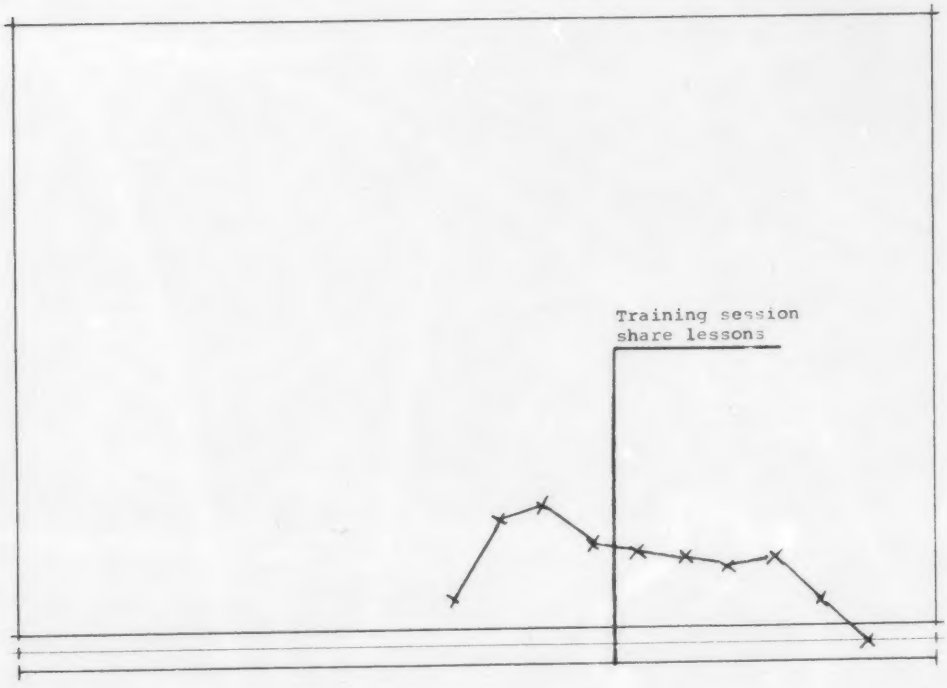
27/8/17



DAILY CHART TRACER (CT-8)

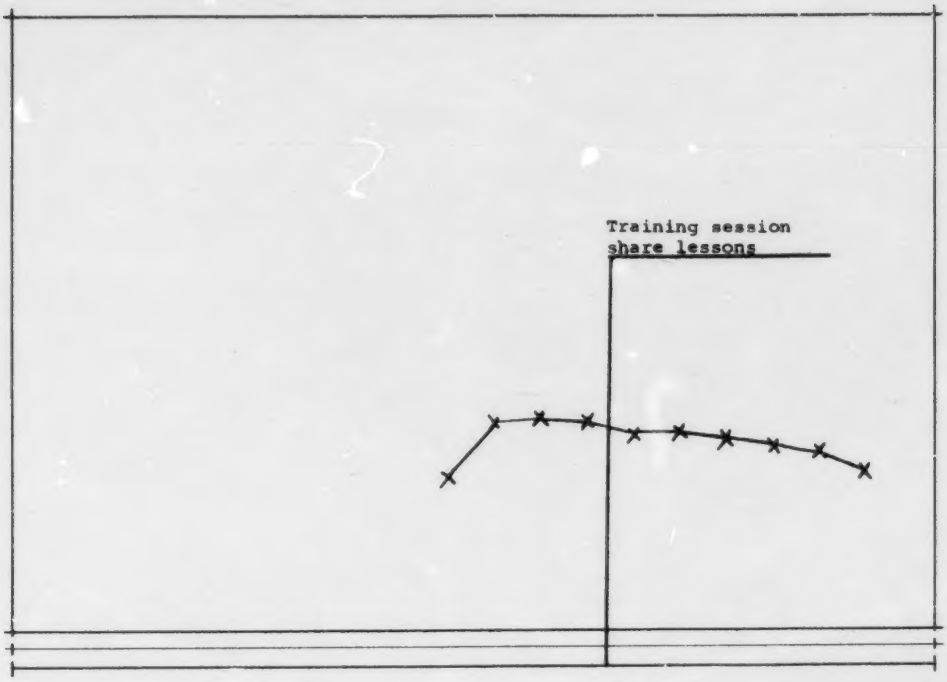
David F. Freschi Larry Wood

Benhaven

P-1

Parent Feedback - Toileting steps with help

Larry Wood



David F. Freschi Larry Wood

Benhaven

P-2

Parent Feedback - Showering steps with help

Larry Wood

DAILY CHART TRACER (CT-8)

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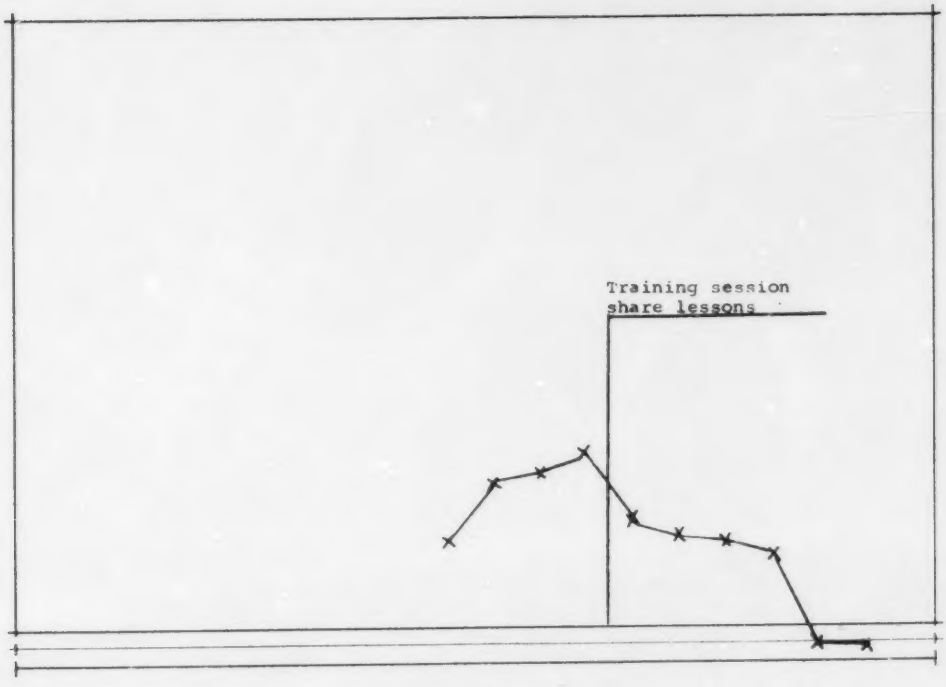

David F. Freschi Larry Wood

Benhaven

P-2

Parent Feedback - Toothbrushing steps with help

Larry Wood

DAILY CHART TRACER (CT-8)

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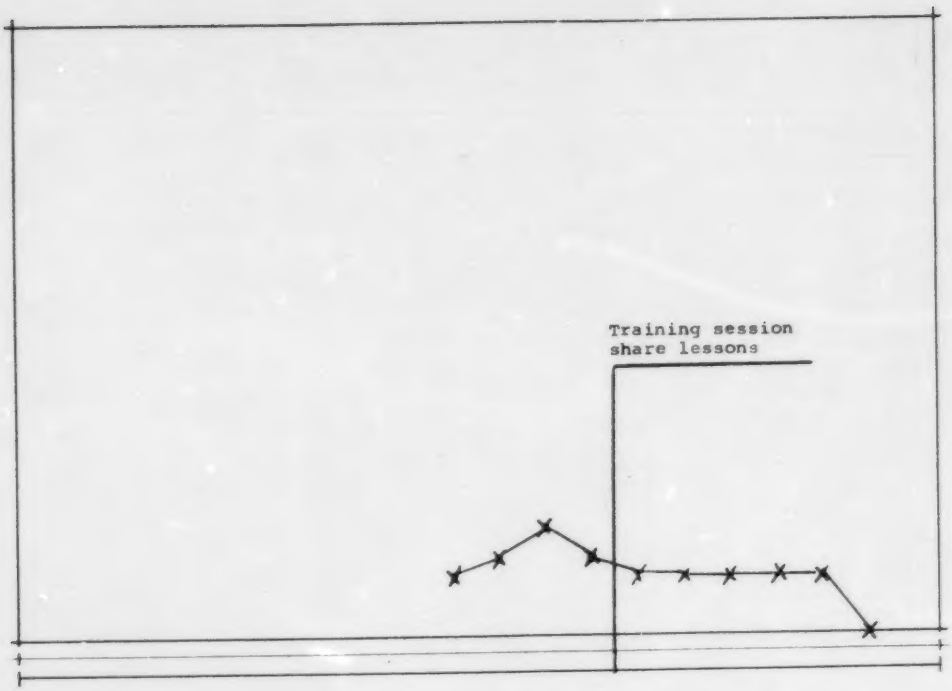
Kansas 66103

27 8/1/2



David F. Freschi Larry Wood

Benhaven

P-4

Parent Feedback - Pressing steps with help

Larry Wood

DAILY CHART TRACER (CT-81)

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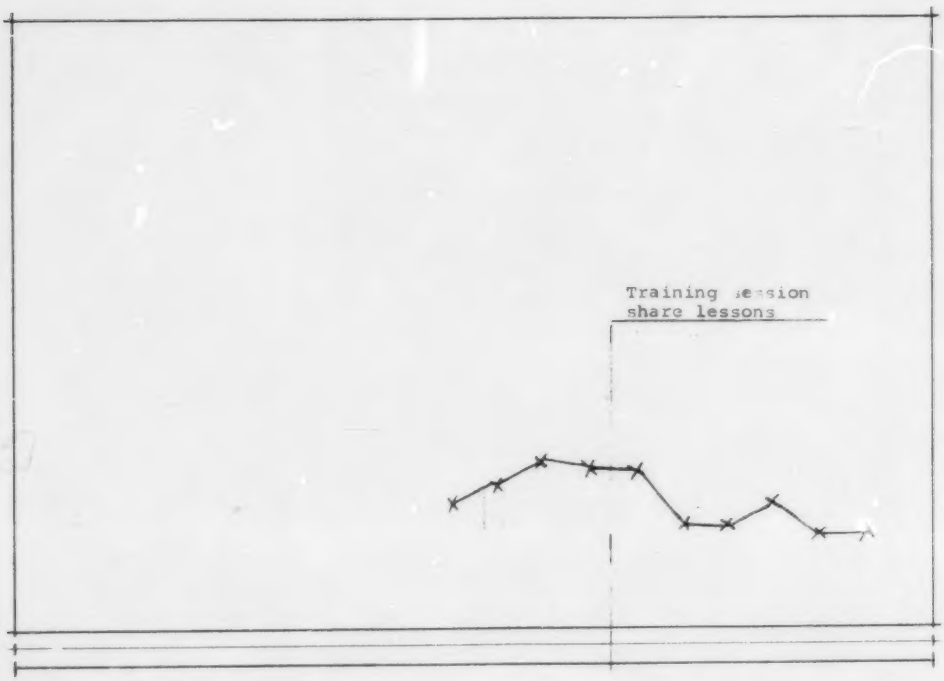
27/8/81-2



David F. Freschi Larry Wood

Benhaven

P-5

Parent Feedback - Streetcrossing step with help

Larry Wood

DAILY CHART TRACER (CT-81)

1) reliability of the instructors who judged the performances of the children associated with the prevocational program.

2) percent and number of children who were successful or unsuccessful in accomplishing each of the prevocational activities and their average time required for acceptable performance of the tasks.

3) statistical tests of the significance of the differences between the group's pre- and post-performances.

4) correlations between the children's profile scores and the degree of their progress in this program.

Phase I - ADL

Two instructors independently judged the children's performances within a 24 hour period. The judges' evaluations of the children were recorded on a 5 point continuous scale, and were based upon three dimensions of the children's performances:

1) Steps to completion of the task
2) Quality of the performance and
3) Supervision required.

The Pearson Product Moment Correlations in Table 1, derived from the instructors evaluations, were satisfactory and ranged from .53 to .91.

Table 2 provides the number and percent of children who were successful or unsuccessful on a given task as well as the mean times for successful completion of the seven ADL activities. Showering and meal preparation were the most difficult tasks for this group to learn. All of the children were capable of functioning effectively within their work space.

The Wilcoxon Matched-Pairs Signed-Rank test was used in the analysis of the pre- and post ADL performances of the children and the number of prods required to bring the children to completion of the task. As shown in Table 3, all T values for performance gain were significant beyond the .01 percent level. Change in the number of prods which the children required between the pre- and post trials was not significant. Supervision remained high on nearly all the tasks - dressing was the one exception to this general pattern. Despite the need for supervision, the children, as a group, made considerable progress in acquiring these skills. This may suggest that, under proper supervision, children with similar handicaps as those in this study, can learn to improve in ADL.

Eight of Benhaven's senior teachers were requested to rank the 16 children in order of their general over-all ability before the prevocational program was launched. In addition, 17 psychometric scores were obtained which provided a broad based profile of each childn's social, intellectual, linguistic, perceptual and mechanical skills. Estimates of the relationships between the distribution of rank scores (teachers' evaluation and the 17 tasks) and the degree of the group's improvement in each ADL activity were obtained in via the Phi Coefficient. Since the variables were assumed to be continuous,

Table 1 Inter-Judge Reliabilities on
Three Dimensions of the Children's ADL Performances

Judgmental Dimensions	ADL Activities						
	Toileting	Showering	Toothbrushing	Dressing	Meal Preparation	Street Crossing	Work Space
[illegible]	.75	.68	.65	.76	.74	.79	.91
[illegible]	.64	.69	.91	.90	.79	.75	.89
[illegible]	.57	.73	.76	.53	.58	.67	.85

Table 2 Number and Percent of the Children who were Successful and Unsuccessful in ADL

Achievement		ADL Activities						
		Toileting	Showering	Toothbrushing	Dressing	Meal Preparation	Street Crossing	Work Space
SUCCESSFUL	No.	10	2	9	12	5	11	16
	%	71	12.5	56	75	31	69	100
	Mean Time	5 min.	14 min.	4.2 min.	5.6 min.	3.6 min.	10 sec.	6.5 min.
UNSUCCESSFUL	No.	4	14	7	4	11	5	0
	%	29	87.5	44	25	69	31	0

Table 3 T Values Obtained From the Wilcoxon Matched-Pairs Signed-Rank Test For Pre- and Post ADL Performances Of the Children and the Number of Prods Required

Dimensions		ADL Activities						
		Toileting	Showering	Toothbrushing	Dressing	Meal Preparation	Street Crossing	Work Space
PERFORMANCES	T=	0.00*	0.00*	1.50*	2.00*	10.00*	7.00*	0.00*
	N=	14	16	14	9	15	15	10
PRODS	T=	14.00	23.50	34.00	0.00*	25.00	+	3.00
	N=	14	12	13	10	11		7

*Significant $p < .01$

+Not determined

Table 4 CORRECTED [illegible] BETWEEN THE CHILDREN'S PRETEST SCORES AND ADL PROGRESS-DISTRIBUTED NO-TIE RANKS AND DICHTOMIZED AT THE MEDIAN

Predictive Measures	Activities: Toileting	Shower[illegible]	Tooth Brushing	Dressing	Meal Prep.	Street Crossing	Work Space
TEACHERS (Ranks)	.00	.00	-.78	.00	-.39	-.39	-.78
VINELAND (SSMS)	.00	.00	-.78	-.39	-.39	.00	-.78
WIPPSI Perform	-.22	.00	.00	-.39	-.39	-.39	-.39
WIPPSI Verbal	-.456	+.39	-.39	.00	-.78	-.39	-.39
WIPPSI Total	.00	+.39	-.39	-.39	-.39	-.78	-.39
CMMS	.00	.00	-.39	-.78	.00	-.39	-.39
ITPA Reception	.00	.00	-.39	-.39	-.39	-.39	-.78
ITPA Sequential	.00	-.39	-.39	-.39	.00	.00	-.78
ITPA Assoc.	+.22	.00	-.78	+.39	+.39	+.39	-.78
ITPA Expression	-.456	+.39	+.39	.00	+.39	.00	-.78
ITPA Total	-.456	+.39	.00	.00	-.39	-.39	-.78
PEABODY PVT	-.456	+.78	.00	+.39	-.39	.00	-.78
[illegible] Percept Motor	-.39	-.39	.00	-.39	.00	-.39	-.39

the correlations were corrected as suggested by Edwards[7] and listed in Table 4. Although the r's should be viewed as merely crude approximations, the considerable number of negative correlations suggests that the children who were capable improved more than in ADL than those who were not as severely handicapped. This is because the less handicapped already had acquired the rudiments of ADL and therefore, had a shorter distance to travel for achieving success in this phase.

Table 5 is a summary of the statistical analysis relative to the children's ability to generalize to the home the ADL skills learned within the school situation. Carryover did occur insofar as the t values between the performance levels of the children at school and at home were insignificant. This ability of the children to transfer or carryover was one of the most encouraging results of the project.

Since many of these children were capable of learning to perform several ADL tasks with supervision, these severely handicapped children may not require complete custodial care. A program, therefore, which fosters a modicum of independence among this group is realistic and economical. Viewed on a flat dollar and cent basis, it would require more to bathe one individual who needs complete care than to supervise two who can bathe themselves.

Phase II - Service-Maintenance

The Pearson Product Moment Correlation Coefficients for interjudge reliabilities are given in Table 6. A modification was made in the judges' evaluation procedures. The factors of task completion and quality were combined in Phases II and III. This was possible because of the Supervision Core Model which was developed after the ADL phase. The quality factor was considered to be a necessary component of each level within the tasks and it was, therefore, much easier for the instructor to judge the children's performances. The problem of examining supervision was treated by charting the number of Supervisory Interventions on the Daily Behavior Charts. Supervision was thus recorded on the basis of frequency over time in the form of rate on the semi-log charts with their attendant advantages for individualizing the program for each child.

Table 7 provides the number and percent of children who were successful and unsuccessful in learning Service-Maintenance. As with the ADL phase, the children were evaluated as they were functioning in their work space and under test conditions. These data also were added to yield a combined score for each child. In all tasks except vacuuming, the majority of the children achieved success in the work space area. Even with children as handicapped as these, productive and gainful activity is an attainable goal.

Table 8 shows the meantimes for successful completion of each of the Service-Maintenance activities. Breakdown is again in the form of results in work space, test conditions and combined.

Table 5 STATISTICAL ANALYSIS OF THE DIFFERENCE BETWEEN THE FIVE ADL PERFORMANCES OF CHILDREN AT SCHOOL AND HOME

Performances		Mean	Standard Deviations	Standard Error of Difference	t
Toileting	School	12.00	.40	.70	1.28
	Home	11.00	2.07		
Showering	School	35.70	10.65	5.15	.42
	Home	33.50	12.33		
Toothbrushing	School	11.64	1.43	.91	1.30
	Home	10.45	2.50		
Dressing	School	7.64	.67	1.50	.43
	Home	7.00	1.35		
Street Crossing	School	6.18	2.17	1.20	2.19
	Home	3.55	3.14		

	Toileting	Showering	Tooth Brushing	Dressing	Meal Prep.	Street Crossing	Work Space
AYRES Kines.& Tact	-.22	.00	-.39	.00	-.39	-.39	-.78
BENDER GESTALT	-.66	.00	.00	-.78	-.00	-.39	-.00
CRAWFORD (Time)	-.456	-.78	.00	.00	.00	+.39	.00
STROMBERG	-.66	-.39	.00	-.39	.00	.00	-.39
HAND TOOL	+.22	-.39	.00	-.39	+.39	.00	.00

Table 7 Number and Percent of the Children who were Successful and Unsuccessful in Service-Maintenance Tasks

Achievement		Service-Maintenance Activities									
		Vacuuming	Mopping	Sweeping	Clean Walls	Clean Tables	Clean Sinks	Dish Washer	Clothes Washer	Clothes Dryer	Ironing
SUCCESSFUL	No.	12	12	15	15	15	14	6	11	10	9
	%	75	75	94	94	94	88	38	69	62	56
UNSUCCESSFUL	No.	4	4	1	1	1	2	10	5	6	7
	%	25	25	6	6	6	12	62	31	38	44

Table 6 Inter-Judge Reliabilities in Phase II

Service-Maintenance	VACUUMING	MOPPING	SWEEPING	SCRUBBING WALLS	SCRUBBING SINK	SCRUBBING TUB	IRONING	OPERATING DRYER	OPERATING WASHER	OPERATING DISHWASHER
RELIABILITIES	.99	.97	.99	.99	.99	1.00	.99	1.00	.97	.99

The Wilcoxon Matched-Pair Signed-Rank test was used to assess the significance of the differences between the children's pre- and post-performances in Service-Maintenance. Since all of the children demonstrated improvement, the obtained T values were zero and therefore exceeded the .01 percent level of confidence.

Table 9 lists the rho correlations between the predictive scores and the rank order of the children's improvement in Service-Maintenance. The results here were especially interesting. In the areas of floor care, cleaning of surfaces, and ironing there was, as in the ADL phase, little or no relationship between the children's scores and the degree of their progress. Several of the psychometric tests were related, however, to the children's achievements in the area of home machinery. The three tasks in the home machinery unit were operating the washing machine, dishwasher, and clothes dryer. Each of these machines requires a definite and nonvarying set of sequential steps. One may speculate that those children who ranked high on tests which required sequential memory, could be expected to be successful in the home machinery tasks. Activities that involve the loading of materials, the setting of controls, and removal of finished items would be especially appropriate for those children. Parenthetically, the teachers' ranking of these children was as effective a predictor of the children's success in learning home machinery as was any of the standardized psychometric instruments.

Table 10 shows the Rho Coefficients on home machinery broken down into the individual tasks. Inconsequential correlations were obtained between the scores on two of the dexterity tests (Crawford Small Parts Dexterity and Bennett Hand-Tool Dexterity Test), and progress in learning to operate home machinery.

Phase III - Production-Assembly

This phase included seven activities which were considered to be tasks that fit the vocational "benchwork" model traditionally used for the handicapped. All tasks involved some product which was changed in nature after the activity (either assembled or packaged.)

Table 11 gives the judges' reliability coefficients for the seven Production-Assembly tasks. The Supervision Core Model was used for this phase and again the reliabilities were high.

Table 12 lists the number and percent of children who were successful and unsuccessful on the seven Production-Assembly items. These data again were categorized in terms of the number of children who were successful in the work space, in the test conditions, and combined. The mean times for successful completion of several Production-Assembly tasks are given in Table 13. With proper instruction and supervision, these children can acquire gainful skills.

The rank-order correlations between the predictive measures and improvement in the Production-Assembly tasks are given in Table 14.

Table 8 Mean Times for Successful Completion of Service Maintenance Tasks

	Service-Maintenance Activities									
	Vacuuming	Mopping	Sweeping	Clean Walls	Clean Tables	Clean Sinks	Dish Washer	Clothes Washer	Clothes Dryer	Ironing
BIRMINGHAM	6' 24"	6' 30"	5' 20"	6'35"	4' 20"	4'16"	5' 40"	3' 0"	2' 16"	2' 40"
MONTGOMERY	6' 24"	7' 24"	6' 50"	7' 0"	4' 40"	4'20"	6' 0"	3' 24"	2' 30"	3' 0"
BOSWORTH		9' 0"	14' 15"	8'15"	6' 25"	5'34"	7' 40"	2' 50"	2' 45"	0' 7"

Table 9 Rho Correlations between Ranks of Predictive Measures and Improvement in Service-Maintenance Tasks

Predictive Measures	Floor Care	Cleaning Surfaces	Home Machinery	Ironing
Teacher's Evaluations	.260	.193	.776 **	.241
Vineland Soc. Mat.	.260	.042	.760 **	-.199
WIPPSI Perform.	.119	.031	.563 *	.058
WIPPSI Verbal	.262	.094	.694 **	-.249
WIPPSI Total	.263	.229	.754 **	.076
CMMS	.371	.235	.791 **	.256
PPVT	.412	.180	.727 **	.159
ITPA - Recept.	.204	.165	.769 **	-.269
ITPA - Seq. Mem.	.410	-.083	.820 **	-.010
ITPA - Assoc.	.367	.170	.729 **	-.180
ITPA - Expr.	.147	.137	.721 **	-.337
ITPA - Total	.269	.122	.820 **	-.185
Bender	-.013	-.244	.310	.030
Ayres - Kin. Tact.	.357	-.230	.602 **	.162
Ayres - Perc-Motor	* .509	-.331	.731 **	.073
Crawford	.281	-.094	.313	.384
Hand Tool	.092	.050	.265	.228
Stromberg	.293	-.146	.589 *	.273

* $p \leq .05$
** $p \leq .01$

Table 10 Rho Correlations between Ranks of Predictive Measures and Improvement in Home Machinery Tasks

Predictive Measures	Home Machinery	Dishwasher	Clothes Washer	Dryer
Teacher's Evaluations	.78 **	.41	.53	.83 **
Vineland Soc. Mat.	.76 **	.52 *	.50 *	.73 **
WIPPSI Perform.	.56 *	.47 *	.48 *	.51 *
WIPPSI Verbal	.69 **	.38	.48 *	.60 **
WIPPSI Total	.75 **	.41	.57 *	.69 **
CMMS	.79 **	.31	.69 **	.66 **
PPVT	.73 **	.37	.66 **	.49 *
ITPA - Recept.	.77 **	.40	.50 *	.64 **
ITPA - Seq. Mem.	.82 **	.34	.76 **	.57 *
ITPA - Assoc.	.73 **	.48 *	.66 **	.58 *
ITPA - Expr.	.72 **	.58 *	.49 *	.62 **
ITPA - Total	.82 **	.47 *	.61 **	.66 **
Bender	.31	.59 *	.02	.02
Ayres - Kin. Tact.	.60 **	.48 *	.55 *	.48 *
Ayres - Perc. Motor	.73 **	.47 *	.68 **	.51 *
Crawford	.31	.09	.41	.25
Hand Tool	.26	.13	.42	.28
Stromberg	.50 *	.33	.55 *	.56 *

*p < .05 **p < .01

Table 11 Inter-Judge Reliabilities in Phase III

Production Assembly Activities	PRINTING	TYPE SETTING	XEROX	GESTNER	PACKAGING	VALVE ASSEMBLY	COMPRESSION UNION ASSEMBLY	
RELIABILITIES	1.0	1.0	.89	1.0	.99	.96	.98	

Table 12 Number and Percent of the Children who were Successful and Unsuccessful in Production-Assembly Tasks

Achievement		Production-Assembly Activities						
		Type Setting	Printing	Xerox	Gestetner	Packaging	Valve Assembly	Compr. Union
Successful	No.	9	13	10	0	16	13	15
		56	81	67	0	100	81	94
Unsuccessful	No.	7	3	5	16	0	3	1
		43	19	33	100	0	19	6

CHAPTER VIII
DISCUSSION

The data obtained in this study suggested that all of these severely autistic and neurologically impaired children were capable of profiting from prevocational training. In the ADL phase carryover into the home was assessed and the parents of these children were involved in training and recording data. The ultimate evaluation of any curriculum is the extent to which knowledge or skill is transferred. This is especially critical with children labeled autistic and/or neurologically impaired. Carryover into the home by these children was evident and their parents proved to be valuable members of the pre-vocational team. The gains in ADL increased these children's independence, reduced the cost of caring for them, and made them candidates for eventual gainful employment.

The children made significant progress in the Service-Maintenance and the Production-Assembly units. The data indicated that these children are capable of acquiring remunerative skills. Tasks such as operating home machinery, valve assembly, packaging, and compression union assembly were especially suited for these children. The ritualism, the need for sameness that autistic and neurologically impaired children often display became an asset rather than a liability in these tasks. Indeed, some of these children may be potentially better qualified for assembly line work than the normal worker who is often adversely affected by the boredom involved. This type of task also lends itself well to structuring. For example, virtually every machine operates on a sequential basis. The judicious use of masking tape, color coded switches, etc., can bring many machines into the realm of the possible for individuals with the type of handicap included in this project.

The tasks which required adaptive reasoning posed difficulties for these children. Even with these tasks, however, the children made significant progress and tasks of this nature should not be ruled out. The instructor should realize, however, that progress will be slower and that each task must be carefully selected, analyzed, and structured to insure that quality will be an integral part of each activity.

The Supervision Core Model developed during the project proved especially suited for this analysis, structure, and evaluation. It was efficient and economical to employ and should be applicable to many populations.

Continual measurement must be included in the instructional process to maintain, evaluate, and upgrade the quality of that process. Traditional norm referencing tests are not sufficient for this task. Precision Teaching techniques and charting are highly efficient for such ongoing assessment and are compatible with the Supervision Core Model developed in this study.

The profile scores obtained in this project were not of particu-

The children's performances in type setting and the Gestetner mimeograph yielded the highest associations with their pre-program scores. Both of these operations demand a fairly sophisticated level of adaptive ability.

In keeping with the manner in which the data for the Service-Maintenance phase was treated, the Wilcoxon Matched-Pairs Signed-Rank Test was used in the statistical analysis of the data obtained in the Production-Assembly unit. Pre- and post-difference scores for each of the seven activities were ranked and T values were obtained. All T's exceeded the .01 percent level. Every child demonstrated some improvement in their ability to accomplish each of the seven Production-Assembly tasks.

It is noteworthy that although the children improved in their operations of the printing press, copy machine, and mimeograph machine, none of the children achieved success at the work space level. Furthermore, the children did not learn to operate the mimeograph machine even under test conditions. Preparing and operating the printing press, copy machine, and mimeograph apparently required a degree of judgment which was beyond the capacities of these children. These three machines do not provide the operator with a consistent structure. The hand printing press is subject to variations caused by operator's strength, quality and flow of the inking material, type and variation of paper, etc.. The copy machine is affected by paper placement, the condition of the toner, and the texture of the paper. The mimeograph is governed by variables similar to those of the printing press, occurring at a higher frequency and often in combination. Among the school's staff (teacher, administrators, and secretaries), the mimeograph is considered the most difficult machine to operate and the one which causes the most problems. This may be because these machines present the worker with a task that continually varies. Does this mean that these tasks are not appropriate for these children? The answer is a qualified "no". After the completion of the Production-Assembly phase, 10 to 15 weeks, some children did go on to achieve some success in these activities. What can be said regarding these activities is that the program designer must perform an extensive analysis of the task, prepare a detailed program for these severely handicapped children and, allow for an extended learning period if success is to be realized. On the basis of this, the program designer would do well to consider other priorities and resources when introducing activities of this nature.

In summary, the data for all three phases: ADL, Service-Maintenance, and Production-Assembly, showed that significant accomplishments were made by the 16 children who participated in this project. Given a well designed program, and under suitable instructional and environmental conditions, autistic and neurologically handicapped children can be expected to learn, and to generalize certain skills. They possess latent potential for performing productive, gainful, and dignified work far beyond mere custodial care.

Table 13 Mean Time of Those Children who Performed Successfully in The Production-Assembly Tasks

Conditions	Production-Assembly Activities						
	Type Setting	Printing	Xerox	Gestetner	Packaging	Valve Assembly	Compr. Union
WORK SPACE	13 min.	-	-	-	9 min.	2.5 min.	1 min.
SCHEDULED TIME	3 min.	10 min.	1 min.	-	4 min.	1 min.	.5 min.

Table 14 Rho Correlation between Ranks of Predictive Measures and Improvement in Production-Assembly Tasks

Predictive Measures	Type Setting	Printing	Xerox +	Gestetner	Packaging	Valve Assembly	Compression Union Assembly
Teachers' Eval	.17	.00	-.47	.54*	-.07	.66**	-.34
Vineland	-.14	.16	-.62**	.48*	.00	.54*	-.11
WIPPSI-Perf.	.71**	.18	-.19	.53*	-.41	.22	-.12
WIPPSI-Verb.	-.04	-.12	-.32	.58*	.25	.26	-.42
WIPPSI-Total	.41	.04	-.19	.63**	-.06	.23	-.58*
CMMS	.51*	-.10	-.15	.35	.00	.07	-.47*
PPVT	.03	.02	-.36	.62**	.17	.21	-.32
ITPA-Recpt.	.13	-.03	-.26	.67**	.11	.33	-.45*
ITPA-Seq.Mem.	.31	-.10	-.33	.51*	.05	.27	-.22
ITPA-Assoc.	.20	-.18	-.71	.63**	.09	.31	-.33
ITPA-Expr.	.16	-.37	-.48*	.51*	-.07	.37	-.48*
ITPA-Total	.23	-.08	-.32	.69**	.06	.32	-.45*
Bender	.59*	.03	-.25	.19	-.43*	.08	-.02
Ayres-Kin.Tact	.69**	.06	-.22	.57*	-.31	.29	-.36
Ayres-Perc.Mot	.59*	-.05	-.33	.45*	-.42	.38	-.22
Crawford	.71**	-.13	-.07	.03	-.47*	.13	.05
Hand Tool	.74**	.21	.18	.29	-.17	.24	-.18
Stromberg	.64**	.18	-.20	.41	-.45*	.36	-.33

+ 15 Children

* Significant $p < .05$
** Significant $p < .01$

APPENDIX A

Appendix A contains the Supervision Core Frames on several tasks treated in this project. The core was treated in Chapter V. When reading the statements on each level, the phrase "under conditions _____" should include the specific criteria for that level. Following this would be suggested pinpoints for evaluating each level (we have included these on 4 tasks). Acceptable rates should be determined by those using the core. The pinpoint of supervisory interventions is applicable to all levels of every task. In employing any of the other pinpoints the instructor should use an accuracy pair (correct responses charted against incorrect responses). The reader should also remember that each level presupposes the completion of the previous levels, e.g. to perform level F successfully, the child must also proceed through levels A-E inclusively.

lar value in pred ting the degree of success for this group in prevocational training.

The methods developed in this project have allowed the prevoc staff to: a) assess the weaknesses and strengths of each individual child in prevocational areas; b) develop a highly individualized prevocational curriculum for each of the children involved; and c) identify the skills and potential vocational fields towards which the individual child would conceivably be directed.

On the basis of the data the following recommendations are made:

1) Prevocational training for this group of children should be maintained and expanded to include other children in Benhaven's population as well as other types of tasks.

2) Prevocational training projects should be undertaken by other schools, agencies and institutions which are concerned with the education of autistic and neurologically impaired children.

3) Precision Teaching and the Supervisory Core Model should be adopted by other educational institutions.

4) The program implemented for these sixteen children was successful and should be maintained and expanded.

5) Vocational training should be implemented and supported for those children in this project who indicated through their performance their potential for acquiring gainful skills.

The methodological shortcomings of the study notwithstanding, these children clearly demonstrated that they possess the potential for acquiring gainful skills. Programs which are more ambitious than those presently existing for this population should be instituted. Autistic and neurologically impaired children need not be relegated to custodial care. Society must continue to endorse innovative programs which are designed to provide these children with opportunities for independence and dignified labor.

SPRING, 1972 D.F.FRESCHI AT BENHAVI
L. WOOD

SUPERVISION — TASK: Setting Type — UNDER CONDITIONS. — PINPOINTS

LEARNER:

SKILLS TO CORE

1 2 3 A. Sits at type stand. Pulls indicated drawer.

1 2 3 B. Demonstrates knowledge of case diagram to drawer.

1. REPLACES TYPE PIECE

1 2 3 C. Replaces 20 pieces of assorted type into appropriate sections of drawer.

2. SELECTS CORRECT TYPE

1 2 3 D. Selects 20 pieces of type from drawer.

CORE 1

3. PLACES TYPE IN STICK

1 2 3 . Selects 25 letters using written model and places in composing stick.

4. SETS AND COMPOSES LETTER

1 2 3 F. Sets two words with spaces and places in composing stick.

1 2 3 . Selects three lines of type of words and sets in composing stick.

CORE 2

5. BALANCES LINE

1 2 3 H. Balances three lines of type.

6. SETS TYPE IN CHASE

1 2 3 I. Sets type in chase.

REFINEMENTS

1 2 3

SPRING, 1972 D.F.FRESCHI AT BENHAVEN
L. WOOD

SUPERVISION — TASK: Mopping — UNDER CONDITIONS. — SUGG. PINPOINTS

LEARNER:

SKILLS TO CORE

1 2 3 A. Holds mop and bucket in correct position

1. ASSUMES CORRECT POSITION

2. MAKES CORRECT MOPPING MOTION

1 2 3 B. Makes mopping motion. Operates wringer effectively. Mixes water and detergent.

3. SCRUBS W. WATER

1 2 3 C. Scrubs floor and spreads water.

4. COMPLETES SQ. FOOT

1 2 3 D. Mops 100 sq. feet acceptably.

CORE 1

5. COMPLETES SQ. FOOT

1 2 3 . Performs D on verbal command. Locates, prepares and returns materials.

6. RETURNS MATERIAL

7. COMPLETES SQ. FOOT IN EMPTY ROOM

1 2 3 F. Mops floor of empty room.

8. COMPLETES SQ. FOOT IN ROOM W. FURNITURE

1 2 3 G. Mops in life setting.

CORE 2

9. LOCATES ROOM THAT NEEDS MOPPI...

1 2 3 H. Determines need and inspect work.

10. GIVES APPRO. DIRECTION TO OTHER

1 2 3 I. Supervises others.

REFINEMENTS

1 2 3

BEST COPY AVAILABLE

SUPERVISION

TASK: Cleaning Table

L. Wood

LEARNER:

UNDER CONDITIONS.

POINTS

SKILLS TO CORE

1 2 3 A. Holds bucket and sponge correctly. Turns on water.

1 2 3 B. Mixes fixed amount of detergent and water. Wrings sponge. Rubs table.

1 2 3 C. Scrubs table with sponge.

1 2 3 D. Cleans [illegible] independently and acceptably.

CORE 1

1 2 3 E. Performs D on verbal command. Locates, prepares and returns materials.

1 2 3 F. Cleans empty table.

1 2 3 G. Cleans table in [illegible] space.

CORE 2

1 2 3 H. Determines need and inspects work.

REFINEMENTS

1 2 3 I. Supervises others.

1 2 3

SUPERVISION

TASK: Packaging Educational Materials

SPRING, 1972 D.F. FRESCHI AT DENHAVE

L. Wood

LEARNER:

UNDER CONDITIONS.

POINTS

SKILLS TO CORE

1 2 3 A. Stands at position.

1 2 3 B. Places one object in box.

1 2 3 C. Places one object in each of twelve boxes as handed.

1 2 3 D. Handles stack of objects around table and places one in each of twelve boxes.

CORE 1

1 2 3 E. Uses material from and returns to storage area.

1 2 3 F. Level E using two stacks of objects, one at a time.

1 2 3 G. Level E using all assigned objects, one at a time.

CORE 2

1 2 3 H. Closes and stacks boxes when filled.

REFINEMENTS

1 2 3 I. Supervises others.

1 2 3

SUPERVISION

TASK: Ironing

LEARNER:

UNDER CONDITIONS.

PINPOINTS

1. INSERTS PLUG
2. HOLDS POSITION
3. SETS BOARD
4. MAKES IRONING MOTION CORRECT
5. IRONS WRINKLES
6. COMPLETES HANDKERCHIEF
7. LOCATES MATERIAL
8. RETURNS MATERIAL
9. ARTICLES OF IRONED
10. HANGS CLOTHING
11. SPRAYS STARCH
12. INSPECTS ARTICLES

SKILLS TO CORE

1 2 3 A. Plugs in iron and holds properly.

1 2 3 B. Sets up board. Spreads cloth. Runs cold iron over cloth.

1 2 3 C. Irons out wrinkles.

1 2 3 D. Irons handkerchief independently and acceptably.

CORE 1

1 2 3 E. Performs D on command. Locates, sets up and returns materials.

1 2 3 F.

1 2 3 G. Irons shirts, pants, towels, handkerchiefs.

CORE 2

1 2 3 H. Hangs ironed clothing on hangers. Uses spray starch.

INDEPENDENTS

1 2 3 I. Determines need and inspects work.

1 2 3 J. Supervises others.

SPRING, 1972 D.F.FRESCHI AT DENHAVEN
L. WOOD

SUPERVISION

TASK: Operation of Clothes Dryer

LEARNER:

UNDER CONDITIONS.

PINPOINTS

1. OPENS AND CLOSES DOOR CORRECTLY
2. CLOTHING LOADED
3. CLEANS FILTER AND SETS SWITCHES
4. DOES ABOVE W. VERBAL COMMAND
5. REMOVES ARTICLE OF CLOTHING FROM MACHINE
6. PERFORMS COMPLETE CYCLE
7. SELECTS WET CLOTHES
8. INSPECTS
9. GIVES APPRO. DIRECTION TO OTHER WORKER

SKILLS TO CORE

1 2 3 A. Demonstrates knowledge of relationship between wet wash and machine.

1 2 3 B. Opens and closes door.

1 2 3 C. Adds wet clothes.

1 2 3 D. Cleans filter. Sets dial. Turns on machine.

CORE 1

1 2 3 E. Performs D on verbal command.

1 2 3 F. Unloads machine.

1 2 3 G. Locates and loads wet laundry and performs D-F.

CORE 2

1 2 3 H. Determines need and inspects work.

INDEPENDENTS

1 2 3 I. Supervises others.

1 2 3

SPRING, 1972 D.F.FRESCHI AT BENHAVI
L. WOOD

SUPERVISION — TASK: Operation of Xerox machine ___ ___ ___ ___ ___ ___ — LEARNER: UNDER CONDITIONS. PINPOINTS

SKILLS TO CORE

1 2 3 A. Stands at machine.

1 2 3 B. Pushes on, off, and start buttons.

1 2 3 C. Places original in position to be copied.

1 2 3 D. Sets print quantity selector and runs ___ copies.

CORE 1

1 2 3 E. Performs A-D on single command. Picks up printed copies and original.

1 2 3 F. Loads paper properly.

1 2 3 G. Copies complete set of material assigned.

CORE 2

RE-INDENTS

1 2 3 H. Clears machine when jammed.

1 2 3 I. Check and maintain fixer level.

1 2 3 J. Supervises others.

SPRING, 1972 D.F.FRESCHI AT BENHAVI
L. WOOD

SUPERVISION — TASK: Operating Printing Press ___ ___ ___ ___ ___ ___ — LEARNER: UNDER CONDITIONS. PINPOINTS

SKILLS TO CORE

1 2 3 A. Stands at press. Holds handle correctly.

1 2 3 B. Pulls handle effectively.

1 2 3 C. Prints sheets.

1 2 3 D. Prints 50 sheets. Inserts and removes paper independently, stacking neatly.

CORE 1

1 2 3 E. Operates press on command. Sets chase. Inks press.

1 2 3 F. Cleans press.

1 2 3 G. Completes one full order.

CORE 2

RE-INDENTS

1 2 3 H. Inspects quality of work.

1 2 3 I. Supervises others through G.

1 2 3 J. Sets pins.

SPRING, 1972 D.F.FRESCHI AT BENHAVE
L. WOOD

SUPERVISION — TASK: Operation of Gestetner Copier — UNDER CONDITIONS. — PINPOINTS

LEARNER:

1 2 3 A. Stands at machine. Holds handle.

1 2 3 B. Turns handle.

1 2 3 C. Loads and unloads paper.

1 2 3 D. Places stencil on machine and runs test copies.

SKILLS TO CORE

CORE 1

1 2 3 E. Performs A-D on single command.

1 2 3 F. Sets machine in operating position and removes stencil and returns.

1 2 3 G. Completes required number of copies. Closes machine down.

CORE 2

1 2 3 H. Inspects work, reruns copies as necessary and stores stencil.

1 2 3 I. Replaces ink when required.

1 2 3 J. Supervises others.

INCIDENTS

SPRING, 1972 D.F.FRESCHI AT BENHAVE
L. WOOD

SUPERVISION — TASK: Assembly of Compression Union — UNDER CONDITIONS. — PINPOINTS

LEARNER:

1 2 3 A. Sits at work place with materials.

1 2 3 B. Given nut with ferrule inserted and coupler, screws coupler into nut.

1 2 3 C. Given nut and ferrule, properly places ferrule into nut.

1 2 3 D. Given nut, ferrule and coupler, places ferrule and screws coupler.

SKILLS TO CORE

CORE 1

1 2 3 E. Given two nuts with ferrules inserted and coupler, screws coupler into nuts.

1 2 3 F. Given two nuts, two ferrules and coupler, places ferrules and screws coupler into nuts.

1 2 3 G. Given containers with pieces, assembles unions.

CORE 2

1 2 3 H. Supervises others.

1 2 3

1 2 3

INCIDENTS

SPRING, 1972 D.F.FRESCHI AT BENHAVI
L. WOOD

SUPERVISION — TASK: Operating Automatic Washer ___ ___ ___ ___ ___ ___ ___ — LEARNER

UNDER CONDITIONS. — POINTS

SKILLS TO CORE

1 2 3 A. Demonstrates knowledge of relationship between dirty laundry and machine.

1 2 3 B. Opens and closes door.

1 2 3 C. Adds detergent and loads clothes evenly.

1 2 3 D. Sets dials and turns on machine.

CORE 1

1 2 3 E. Performs D on verbal command.

1 2 3 F. Unloads machine.

1 2 3 G. Locates and loads dirty laundry and completes washing.

CORE 2

1 2 3 H. Determines need and inspects work.

INDEPENDENTS

1 2 3 I. Supervises others.

1 2 3

SPRING, 1972 D.F.FRESCHI AT BENHAVI
L. WOOD

SUPERVISION — TASK: Valve Assembly ___ ___ ___ ___ ___ ___ ___ — LEARNER

UNDER CONDITIONS. — POINTS

SKILLS TO CORE

1 2 3 A. Sits at work place with materials and tools (screw driver and wrench).

1 2 3 B. Given assembled stem, bonnet and handle, inserts into body.

1 2 3 C. Given assembled stem, bonnet and handle, inserts into body and screw on bonnet, tightening with wrench.

1 2 3 Given assembled stem and bonnet, places handle on stem and screws bonnet on with screwdriver and tightens bonnet on with wrench.

CORE 1

1 2 3 Given assembled stem, puts on bonnet, then handle, then tightens both with tools.

1 2 3 Given washer, then packing and screws on, then puts on bonnet, then handle, then tightens both with tools.

1 2 3 G. Given disassembled valve, puts on packing, washer, bonnet, handle and tightens with tools.

CORE 2

1 2 3 H. Given containers with parts, sets up work area and assembles valves.

INDEPENDENTS

1 2 3 I. Supervises others.

1 2 3

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L. WOOD

SUPERVISION — TASK: Vacuuming — UNDER CONDITIONS. — PINPOINTS

LEARNER:

SKILLS TO CORE

1 2 3 A. Plugs in vacuum and holds in correct position.

1 2 3 B. Turns on vacuum and moves nozzle over floor.

1 2 3 C. Picks up prepared dirt with nozzle.

1 2 3 D. Vacuums 100 sq. feet effectively.

CORE 1

1 2 3 E. Performs D on verbal command. Locates and returns materials.

1 2 3 F. Vacuums floor of empty room.

1 2 3 G. Vacuums in life space.

CORE 2

RESIDENTS

1 2 3 H. Determines need and inspects work.

1 2 3 I. Supervises others.

1 2 3

SPRING, 1972 D.F.FRESCHI AT BENHAVI
L. WOOD

SUPERVISION — TASK: Cleaning Sink — UNDER CONDITIONS. — PINPOINTS

LEARNER:

SKILLS TO CORE

1 2 3 A. Holds cleanser and sponge correctly. Turns on water.

1 2 3 B. Wipes bottom of sink with sponge.

1 2 3 C. Pours proper amount of cleanser into sink.

1 2 3 D. Scrubs entire bottom of sink independently and acceptably.

CORE 1

1 2 3 E. Performs D on verbal command. Locates and returns materials.

1 2 3 F. Scrubs sink walls.

1 2 3 G. Cleans entire sink and surrounding area.

CORE 2

RESIDENTS

1 2 3 H. Determines need and inspects work.

1 2 3 I. Supervises others.

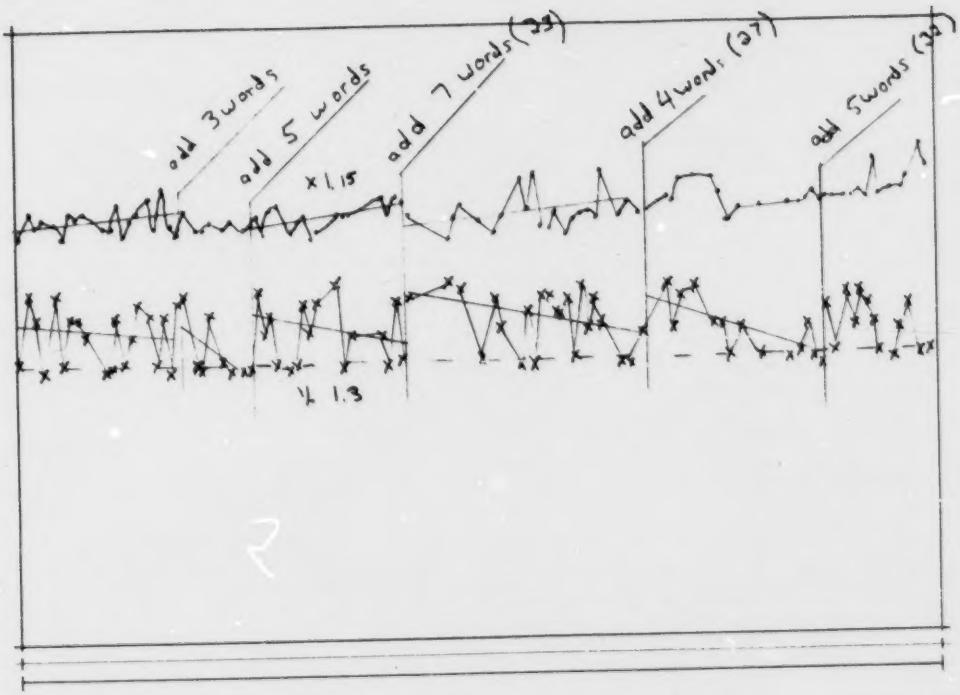
1 2 3

APPENDIX B

Appendix B contains daily behavior charts selected from several areas of the children's programs. These are offered in the hope that the reader might obtain a fuller view of the children involved in this project.

Behavior Research Co.
Box 3351 Kansas City,
Kansas 66103

22 10 2910 1712 11 2 11



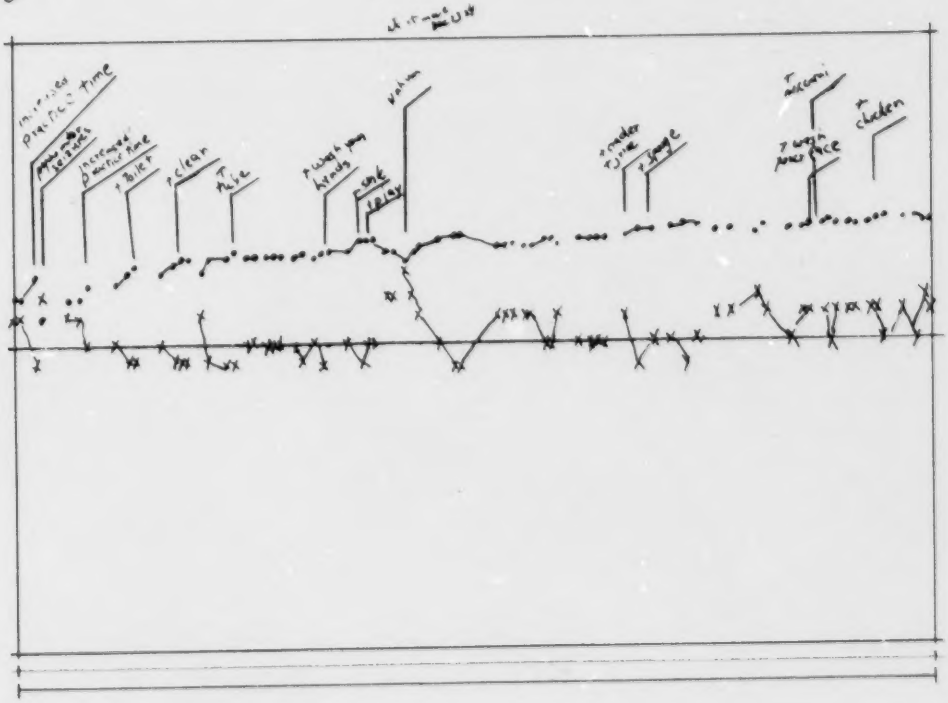
David Fresch Robin Wood Beuhaven Inger Connery

Hector 13 BC core sym
Inger Connery From word

DAILY CHART TRACER (CT-1)

Behavior Research Co.
Box 3351 Kansas City,
Kansas 66103

22 18 17 12 15 11 2



David Robin Lin
Fresch Wood Rymaneff

Bob 16 AUT word

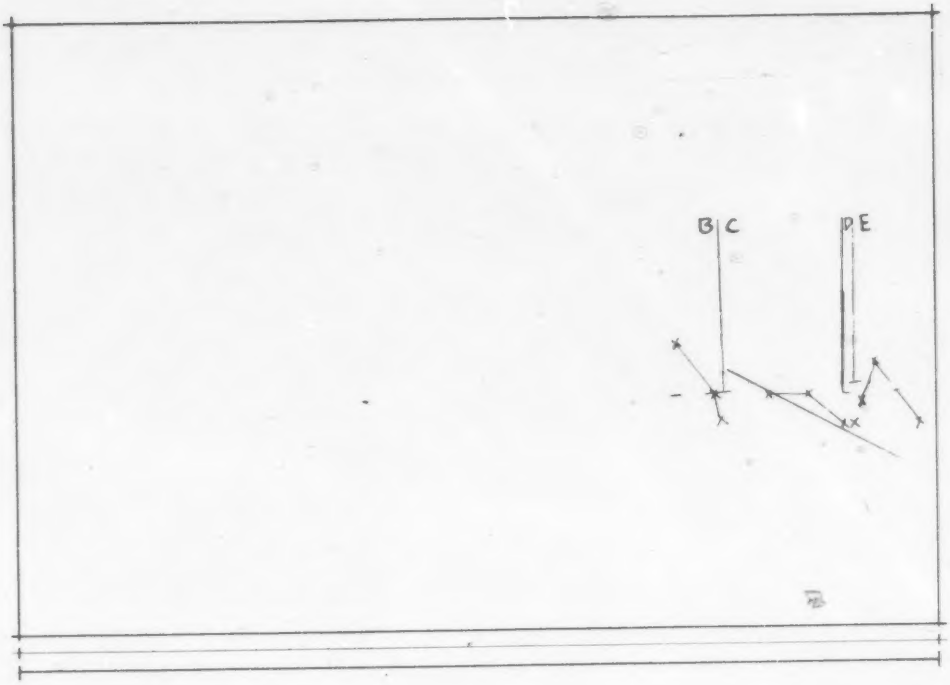
DAILY CHART TRACER (CT-1)

APPENDIX C

As was stated in the text, the individual growth of each child in prevoc was of primary importance in this project. This individual growth can be shown in the monthly prevocational reports. A selection of these reports has been included here.

Behavior Research Co.
Box 3351 Kansas City,
Kansas 66103

27-8-72 24-9-72 22-10-72



DAILY CHART TRACER (CT-4)

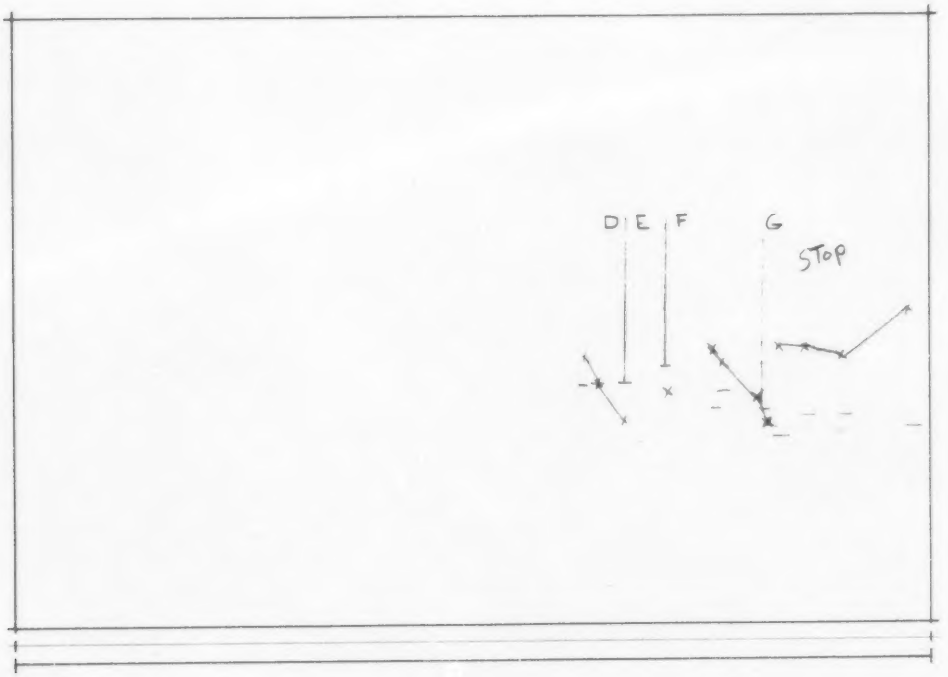
DAVID FRESCHI | LARRY WOOD | TOM DOBOCINSKI

Bill | 15 | AUT/ E.U. | RECEIVES SI (TABLE)

TOM DOBOCINSKI

Behavior Research Co.
Box 3351 Kansas City,
Kansas 66103

27-8-72 24-9-72 22-10-72



DAILY CHART TRACER (CT-4)

DAVID FRESCHI | LARRY WOOD | TOM DOBOCINSKI

12 | AUT/ E.U. | RECEIVES SI (SWEEPING)

TOM DOBOCINSKI

	Pre-Evaluation	Post-Evaluation
Showering	56%	96%
Toothbrushing	66%	100%
Cold Meal Preparation	68%	96%
Streetcrossing	20%	44%
Dressing	100%	100%
Clothing Care	60%	100%
Motility in School Environment	34%	100%
Toileting	68%	100%

Lester has recently been evaluated in 11 service-maintenance tasks: sweeping, mopping, vacuuming, cleaning blackboards, cleaning walls, cleaning tables, cleaning sinks, operating dishwasher, operating washing machine, operating dryer, and ironing. Instruction is now being given in an effort to have Lester perform independently at the highest possible level in each of these activities. As in the activities of daily living phase, continual evaluation plus a final rating will be given for this ten-week period.

REPORT ON PRE-VOCATIONAL TRAINING

During the last reporting period, Lester has 1) been evaluated, 2) received instruction in, and 3) been re-evaluated in various service-maintenance and production-assembly activities.

For purposes of evaluation and instruction, each activity has been divided into levels as shown on the attached sheets. Lester was evaluated in each activity and a determination was made of the highest level he could perform without supervision. Instruction began on the next higher level of each activity. As Lester demonstrated proficiency at one level of an activity, he began receiving instruction onthe next level. This procedure is used because it helps provide a continuous assessment of the child's progress and also because it provides a series of short term instructional goals which lead to a long term objective in each activity.

Below are indicated the initial levels for each activity and the levels which Lester reached by the end of the period of instruction.

SERVICE-MAINTENANCE	Pre-Evaluation	Post-Evaluation
Sweeping	C	E
Mopping	A	C
Vacuuming	C	C
Cleaning Wall	A	E
Cleaning Table	A	E
Cleaning Sink	B	E
Operating Dishwasher	B	C
Operating Washer	C	C
Operating Dryer	C	C
Ironing	C	E

PRODUCTION-ASSEMBLY	Pre-Evaluation	Post-Evaluation
Printing	D	F
Setting Type	E	H
Operation of Gestetner	B	C
Operation of Xerox	B	D
Packaging Education Materials	B	G
Assembly of Compression Union	D	I
Assembly of Valve	F	H

DUNCAN

During the last reporting period, Duncan has 1) been evaluated, 2) received a 10 week period of instruction, and 3) been re-evaluated in various activities of daily living. These activities included showering, toothbrushing, cold meal preparation, streetcrossing, dressing, clothing care, motility in the school environment, and toileting. The figures below indicate the percentage of sequential steps that Duncan has completed independently and successfully in each task area.

	Pre-Evaluation	Post-Evaluation
Showering	40%	88%
Toothbrushing	86%	100%
Cold Meal Preparation	88%	96%
Streetcrossing	68%	100%
Dressing	60%	96%
Clothing Care	56%	100%
Motility in School Environment	100%	100%
Toileting	68%	100%

Duncan has recently been evaluated in 11 service-maintenance tasks: sweeping, mopping, vacuuming, cleaning blackboards, cleaning walls, cleaning tables, cleaning sinks, operating dishwasher, operating washing machine, operating dryer, and ironing. Instruction is now being given in an effort to have Duncan perform independently at the highest possible level in each of these activities. As in the activities of daily living phase, continual evaluation plus a final rating will be given for this 10 week period.

REPORT ON PRE-VOCATIONAL TRAINING

During the last reporting period, Duncan has 1) been evaluated, 2) received instruction in, and 3) been re-evaluated in the activities listed below.

For purposes of evaluation and instruction, each activity has been divided into levels as shown on the attached sheets. Duncan was evaluated in each activity and a determination was made of the highest level he could perform without supervision. Instruction began on the next higher level of each activity. As Duncan demonstrated proficiency at one level of an activity, he began receiving instruction on the next level. This procedure is used because it helps provide a continuous assessment of the child's progress and also because it provides a series of short term instructional goals which lead to a long term objective in each activity.

progress and also because it provides a series of short term instructional goals which lead to a long term objective in each activity.

Below are indicated the initial levels for each activity and the levels which Bernard reached by the end of the 15 week period of instruction.

	Pre-Evaluation	Post-Evaluation
Sweeping	C	G
Mopping	A	E
Vacuuming	D	E
Cleaning Wall	D	F
Cleaning Table	F	H
Cleaning Sink	C	E
Operating Dishwasher	C	C
Operating Washer	B	E
Operating Dryer	C	G
Ironing	C	E

Bernard has recently received initial evaluations in various production-assembly activities and is currently receiving instruction in these activities following the same procedure as outlined above for the service-maintenance activities. Below are the pre-evaluation levels.

Printing	D
Setting Type	D
Operation of Gestetner Copy Machine	B
Operation of Xerox Copy Machine	C
Packaging of Educational Materials	H
Assembly of Compression Union	G
Assembly of Valve	E

LESTER

During the last reporting period, Lester has 1) been evaluated, 2) received a 10-week period of instruction and 3) been re-evaluated in various activities of daily living. These activities included showering, toothbrushing, cold meal preparation, streetcrossing, dressing, clothing care, motility in the school environment, and toileting. The figures below indicate the percentage of sequential steps that Lester has completed independently and successfully in each task area.

BERNARD

During the last reporting period, Bernard has 1) been evaluated, 2) received a 10-week period of instruction, and 3) been re-evaluated in various activities of daily living. These activities included showering, toothbrushing, cold meal preparation, streetcrossing, dressing, clothing care, motility in the school environment, and toileting. The figures below indicate the percentage of sequential steps that Bernard has completed independently and successfully in each task area.

	Pre-Evaluation	Post-Evaluation
Showering	56%	96%
Toothbrushing	66%	100%
Cold Meal Preparation	68%	96%
Streetcrossing	20%	44%
Dressing	100%	100%
Clothing Care	60%	100%
Motility in School Environment	34%	100%
Toileting	68%	100%

Bernard has recently been evaluated in 11 service-maintenance tasks: sweeping, mopping, vacuuming, cleaning blackboards, cleaning walls, cleaning tables, cleaning sinks, operating dishwasher, operating washing machine, operating dryer, and ironing. Instruction is now being given in an effort to have Bernard perform independently at the highest possible level in each of these activities. As in the activities of daily living phase, continual evaluation plus a final rating will be given for this ten-week period.

REPORT ON PRE-VOCATIONAL TRAINING

During the last reporting period, Bernard has 1) been evaluated, 2) received instruction in, and 3) been re-evaluated in various service-maintenance activities. These activities included sweeping, mopping, vacuuming, cleaning wall, tables and sinks.

For purposes of evaluation and instruction, each activity has been divided into levels as shown on the attached sheets. Bernard was evaluated in each activity and a determination was made of the highest level he could perform without supervision. Instruction began on the next higher level of each activity. As Bernard demonstrated proficiency at one level of an activity he began receiving instruction on the next level. This procedure is used because it helps provide a continuous assessment of the child's

because it provides a series of short term instructional goals which lead to a long term objective in each activity.

Below are indicated the initial levels for each activity and the levels which Lynn reached by the end of the 15 week period.

	Pre-Evaluation	Post-Evaluation
Sweeping	G	H
Mopping	G	G
Vacuuming	C	F
Cleaning Wall	F	H
Cleaning Table	G	H
Cleaning Sink	G	H
Operating Dishwasher	F	G
Operating Washer	F	H
Operating Dryer	C	H
Ironing	E	G

Lynn has recently received initial evaluations in various production-assembly activities and is currently receiving instruction in these activities following the same procedures as outlined above for the service-maintenance activities. Below are the pre-evaluation levels.

Printing	D
Setting Type	D
Operation of Gestetner Machine	B
Operation of Xerox Machine	B
Packaging Educational Materials	H
Assembly of Compression Union	F
Assembly of Valve	B

REPORT ON PRE-VOCATIONAL TRAINING

During the last reporting period, Lynn has 1) been evaluated, 2) received instruction in, and 3) been re-evaluated in the activities listed below.

For purposes of evaluation and instruction, each activity has been divided into levels as shown on the attached sheets. Lynn was evaluated in each activity and a determination was made of the highest level she could perform without supervision. Instruction began on the next higher level of each activity. As Lynn demonstrated proficiency at one level of an activity, she began receiving instruction on the next level. This procedure is used because it helps provide a continuous assessment of the child's progress and also because it provides a series of short term instructional goals which lead to a long term objective in each activity.

Below are indicated the initial levels for each activity at the beginning of the reporting period and the levels which Lynn reached by the end of the reporting period.

ACTIVITY	Pre-Evaluation	Post-Evaluation
Printing	D	D
Setting Type	D	E
Operating Xerox	B	G
Operating Gestetner	B	B
Packaging Educational Materials	H	J
Valve Assembly	B	G
Assembly of Compression Union	F	H

HECTOR

During the last reporting period, Hector has 1) been evaluated, 2) received a 10 week period of instruction, and 3) been re-evaluated in various activities of daily living. These activities included showering, toothbrushing, cold meals preparation, streetcrossing, dressing, clothing care, motility in the school environment, and toileting. The figures below indicate the percentage of sequential steps that Hector has completed independently and successfully in each task area.

	Pre-Evaluation	Post-Evaluation
showering	26%	32%
toothbrushing	28%	76%
cold meal preparation	86%	76%
streetcrossing	52%	100%
dressing	46%	96%
clothing care	40%	100%
motility in the school environment	54%	100%
toileting	66%	90%

Hector has recently been evaluated in 1) service-maintenance tasks: sweeping, mopping, vacuuming, cleaning walls, cleaning tables, cleaning sinks, operating dishwasher, washing machine, dryer, and ironing. Instruction is now being given in an effort to have Hector perform independently at the highest level possible in each of these activities. As in the activities of daily living phase, continual evaluation plus a final rating will be given for this 10 week period.

REPORT ON PRE-VOCATIONAL TRAINING

During the last reporting period, Hector has 1) been evaluated, 2) received instruction, and 3) been re-evaluated in various service-maintenance and production-assembly activities.

For purposes of evaluation and instruction, each activity has been divided up into levels as shown on the attached sheets. Hector was evaluated in each activity and a determination was made of the highest level he could perform without supervision. Instruction began on the next higher level of each activity. As Hector demonstrated proficiency at one level of an activity, he began receiving instruction on the next level. This procedure is used because it helps provide a continuous assessment of the child's progress and also because it provides a series of short term goals

Below are indicated the initial levels for each activity at the beginning of the reporting period and the levels which Duncan reached by the end of the reporting period.

ACTIVITY	Pre-Evaluation	Post-Evaluation
Printing	D	D
Setting Type	B	B
Operating Xerox Machine	B	F
Operating Geststner Copier	B	B
Packaging Educational Materials	G	J
Valve Assembly	B	E
Assembly of Compression Union	F	G
Mopping	C	F
Cleaning Sink	C	G
Tying Shoes	C	E

REPORT ON PRE-VOCATIONAL TRAINING

During the last reporting period, Duncan has 1) been evaluated, 2) received instruction in, and 3) been re-evaluated in various service-maintenance activities. These activities included sweeping, mopping, vacuuming, cleaning walls, tables, and sinks, operating dishwasher, clothes washer and dryer, and ironing.

For purposes of evaluation and instruction each activity has been divided into levels as shown on the attached sheets. Duncan was evaluated in each activity and a determination was made of the highest level he could perform without supervision. Instruction began on the next higher level of each activity. As Duncan demonstrated proficiency at one level of an activity, he began receiving instruction on the next level. This procedure is used because it helps provide a continuous assessment of the child's progress and also because it provides a series of short term instructional goals which lead to a long term objective in each activity.

Below are indicated the initial levels for each activity and the levels which Duncan reached by the end of the 15 week period of instruction.

	Pre-Evaluation	Post-Evaluation
Showering	C	F
Mopping	C	E
Vacuuming	C	E
Cleaning Wall	C	F
Cleaning Table	C	F
Cleaning Sink	C	G
perating Dishwasher	F	G
perating Washer	C	C
perating Dryer	C	G
Ironing	C	C

Duncan has recently received initial evaluations in various production-assembly activities and is currently receiving instruction in these activities following the same procedure as outlined above for the service-maintenance activities. Below are the pre-evaluation levels.

Printing	D
Setting Type	B
Operation of Gestetner Copy Machine	B
Operation of Xerox Copy Machine	B
Packaging Educational Materials	H
Assembly of Compression Union	G
Assembly of Valve	B

LYNN

During the last reporting period, Lynn has 1) been evaluated, 2) received a 10 week period of instruction, and 3) been re-evaluated in various activities of daily living. These activities included showering, toothbrushing, cold meal preparation, street-crossing, dressing, clothing care, motility in the school environment, and toileting. The figures below indicate the percentage of sequential steps that Lynn has completed independently and successfully in each task area.

	Pre-Evaluation	Post-Evaluation
Showering	80%	98%
Toothbrushing	100%	100%
Cold Meal Preparation	96%	100%
Streetcrossing	96%	100%
Dressing	100%	100%
Clothing Care	94%	100%
Motility in School Environment	84%	100%
Toileting	80%	100%

Lynn has recently been evaluated in 11 service-maintenance tasks: sweeping, mopping, vacuuming, cleaning blackboards, cleaning walls, cleaning tables, cleaning sinks, operating dishwasher, washing machine, dryer,and ironing. Instruction is now being given in an effort to have Lynn perform independently at the highest possible level in each of these activities. As in the activities of daily living phase, continual evaluation plus a final rating will be given for this 10 week period.

REPORT ON PRE-VOCATIONAL TRAINING

During the last reporting period, Lynn has 1) been evaluated, 2) received instruction in, and 3) been re-evaluated in various service-maintenance activities. These activities included sweeping, mopping, vacuuming, cleaning walls, tables and sinks, operating dishwasher, clothes washer and dryer, and ironing.

For purposes of evaluation and instruction, each activity has been divided into levels as shown on the attached sheets. Lynn was evaluated in each activity and a determination was made of the highest level she could perform without supervision. Instruction began on the next higher level of each activity. As Lynn demonstrated proficiency at one level of an activity, she began receiving instruction on the next level. This procedure is used because it helps provide a continuous assessment of the chi'd's progress and also

	Pre-Evaluation	Post-Evaluation
Setting type	B	B
Printing	C	D
Operating Xerox	A	C
Operating Gestetner	B	B
Packing Educational Materials	C	H
Valve Assembly	B	F
Compression Union Assembly	D	F

During the last reporting period, Bob has 1) been evaluated, 2) received instruction in, and 3) been re-evaluated in various tasks in activities of daily living and service-maintenance activities.

The activities of daily living included showering, toothbrushing, cold meal preparation, streetcrossing, dressing, clothing care, motility in the school environment, and toileting.

	Pre-Evaluation	Post-Evaluation
showering	40%	54%
toothbrushing	48%	86%
cold meal preparation	52%	74%
streetcrossing	20%	66%
dressing	100%	100%
clothing care	60%	100%
motility in school environment	20%	100%
toileting	90%	96%

DOREEN

During the last reporting period, Doreen has 1) been evaluated, 2) received a 10 week period of instruction, and 3) been re-evaluated in various activities of daily living. These activities included showering, toothbrushing, cold meal preparation, streetcrossing, dressing, clothing care, motility in the school environment, and toilet. The figures below indicate the percentage of sequential steps that Doreen has completed independently and successfully in each task area.

	Pre-Evaluation	Post-Evaluation
showering	56%	94%
toothbrushing	76%	94%
cold meal preparation	76%	90%
streetcrossing	40%	100%
dressing	70%	100%
clothing care	58%	100%
motility in school environment	100%	100%
toileting	80%	100%

Doreen has recently been evaluated in 11 service-maintenance tasks: sweeping, mopping, vacuuming, cleaning backboards, walls, tables, sinks, operating dishwasher, washing machine, dryer, and ironing. Instruction is now being given in an effort to have Doreen perform independently at the highest possible level in each which lead to a long term objective in each activity.

Below are indicated the initial levels for each activity and the levels which Hector reached by the end of the period of instruction.

SERVICE-MAINTENANCE	Pre-Evaluation	Post-Evaluation
sweeping	A	D
mopping	A	A
vacuuming	B	D
cleaning wall	A	C
cleaning table	A	C
cleaning sink	B	C
operating dishwasher	A	A
operating washer	B	D
operating dryer	C	C
ironing	A	C
PRODUCTION-ASSEMBLY		
printing	C	E
setting type	A	B
operation of Gestetner	B	C
operation of Xerox	C	E
packaging educational materials	A	I
assembly of compression union	B	F
assembly of valve	B	E

BOB

During the last reporting period, Bob has 1) been evaluated, 2) received instruction in, and 3) been re-evaluated in various production-assembly activities.

For purposes of evaluation and instruction, each activity has been divided into levels as shown on the attached sheets. Bob was evaluated in each activity and a determination was made of the highest level he could perform without supervision. Instruction began on the next higher level of each activity. As Bob demonstrated proficiency at one level of an activity, he began receiving instruction on the next. This procedure is used because it helps provide a continuous assessment of the child's progress and also because it provides a series of short term instructional goals which lead to a long term objective in each activity.

Below are indicated the initial levels for each activity at the beginning of the reporting period and the levels which Bob reached by the end of the period of instruction.

of these activities. As in the activities of daily living phase, continual evaluation plus a final rating is given for this period of instruction

Below are indicated the initial levels for each activity and the levels which Doreen reached by the end of the period of instruction.

	Pre-Evaluation	Post-Evaluation
sweeping	C	F
mopping	A	F
vacuuming	C	E
cleaning walls	E	G
cleaning table	C	F
cleaning sink	E	H
operating dishwasher	D	G
operating washer	C	G
operating dryer	C	C
ironing	C	E

Doreen has recently received initial evaluations in various production-assembly activities and is currently receiving instruction in these activities following the same procedure as outlined above for the service-maintenance activities. Below are the pre-evaluation levels.

printing	D
setting type	E
operation of Gestetner	B
operation of Xerox	A
packaging educational material	H
assembly of compression union	A
assembly of valve	E

Below are indicated the initial levels for each activity at the beginning of the reporting period and the levels which Doreen reached by the end of the reporting period.

ACTIVITY	Pre-Evaluation	Post-Evaluation
printing	D	E
setting type	E	F
operating Xerox	A	F
operating Gestetner	B	B
packing educational material	H	I
valve assembly	E	H
assembly of compression union	A	H
sweeping	C	G
cleaning tables	C	E
cleaning windows	B	D

RALPH

During the last reporting period, Ralph has 1)been evaluated, 2) received instruction during a 10 week period, and 3) been re-evaluated in various activities of daily living. These activities included showering, toothbrushing, cold meal preparation, streetcrossing, dressing, clothing care, motility in the school environment, and toileting. The figures below indicate the percentage of sequential steps that Ralph has completed independently and successfully in each task area.

	Pre-Evaluation	Post-Evaluation
showering	64%	84%
toothbrushing	100%	100%
cold meal preparation	80%	100%
streetcrossing	60%	100%
dressing	100%	100%
clothing care	90%	100%
motility in school environment	90%	100%
toileting	62%	100%

During the last reporting period, Ralph has 1) been evaluated, 2) received instruction in, and 3) been re-evaluated in various service-maintenance and production-assembly tasks.

Below are indicated the initial levels for each activity and the levels which Ralph reached by the end of the period of instruction.

SERVICE-MAINTENANCE	Pre-Evaluation	Post-Evaluation
sweeping	C	G
mopping	C	G
vacuuming	C	F
cleaning wall	D	H
cleaning table	D	H
cleaning sink	C	G
operating dishwasher	C	D
operating washer	B	F
operating dryer	C	G
ironing	C	E
PRODUCTION ASSEMBLY		
printing	D	E
setting type	E	H
operation of Gestetner	B	C
operation of Xerox	B	G
packaging educational material	H	I
assembly of compression union	A	I
assembly of valve	A	F

BILL

During the last reporting period Bill has 1) been evaluated, 2) received instruction in, and 3) been re-evaluated in various service-maintenance activities. These activities included sweeping, mopping, vacuuming, cleaning walls, tables, and sinks, operating dishwasher, clothes washer, and ironing.

Below are indicated the initial levels for each activity and the levels which Bill reached by the end of the 15 week period of instruction.

PRODUCTION-ASSEMBLY	Pre-Evaluation	Post-Evaluation
setting type	A	B
printing	B	D
operating Xerox	B	E
operating Gestetner	B	B
packaging educational material	B	I
valve assembly	F	I
compression union assembly	D	H
SERVICE-MAINTENANCE		
sweeping	A	C
mopping	A	D
vacuuming	C	C
cleaning wall	A	E
cleaning table	C	D
cleaning sink	C	D
operating dishwasher	C	C
operating washer	C	D
operating dryer	C	E
ironing	A	C

The activities of daily living included showering, toothbrushing, cold meal preparation, streetcrossing, dressing, clothing care, motility in the school environment, and toileting. The figures below indicate the percentage of sequential steps that Dexter has completed independently and successfully in each task area.

	Pre-Evaluation	Post-Evaluation
showering	48%	72%
toothbrushing	74%	100%
cold meal preparation	80%	84%
streetcrossing	26%	100%
dressing	78%	80%
clothing care	50%	100%
motility in school environment	76%	100%
toileting	96%	100%

Dexter, on the basis of an initial evaluation, started the period of instruction at specified levels in each activity. As Dexter showed that he could complete one level of an activity independently, he began receiving instruction on the next level.

SAM

During the last reporting period, Sam has 1) been evaluated, 2) received instruction in, and 3) been re-evaluated in various production-assembly activities.

Below are the initial levels for each activity at the beginning of the reporting period and the levels which Sam reached by the end of the period of instruction.

	Pre-Evaluation	Post-Evaluation
setting type	G	G
printing	E	E
operating Xerox	C	F
operating Gestetner	B	C
packaging educational material	C	J
valve assembly	D	F
compression union assembly	D	G

STAN

During the last reporting period, Stan has 1) been evaluated, 2) received instruction in, and 3) been re-evaluated in various service-maintenance, production-assembly activities, and activities in daily living.

Below are indicated the initial levels for each activity and the levels which Stan reached by the end of the period of instruction

	Pre-Evaluation	Post-Evaluation
SERVICE-MAINTENANCE		
sweeping	A	D
mopping	C	E
vacuuming	C	D
cleaning wall	A	D
cleaning table	A	F
cleaning sink	A	D
operating dishwasher	B	B
operating washer	B	B
operating dryer	A	B
ironing	A	D
PRODUCTION-ASSEMBLY		
printing	D	E
setting type	B	C
operation of Gestetner	B	C
packaging educational material	G	I
operation of Xerox	B	C
Assembly of compression union	B	I
assembly of valve	B	C

The figures below indicate the percentage of sequential steps that Stan has completed independently and successfully in each activity of daily living. Instruction is now being given in an effort to have Stan perform independently at the highest possible level in each of these activities.

	Pre-Evaluation	Post-Evaluation
showering	56%	90%
toothbrushing	70%	86%
cold meal preparation	84%	82%
streetcrossing	52%	44%
dressing	86%	100%
clothing care	50%	100%
motility in school environment	40%	100%
toileting	56%	96%

RONALD

During the last reporting period, Ronald has 1) been evaluated, 2) received instruction in, and 3) been re-evaluated in various production-assembly activities and service-maintenance tasks.

Below are indicated the initial levels for each activity at the beginning of the reporting period and the levels which Ronald reached by the end of the period of instruction

PRODUCTION-ASSEMBLY	Pre-Evaluation	Post-Evaluation
settint type	B	B
printing	D	E
operating Xerox	C	F
operating Gestetner	B	C
packaging educational material	C	G
valve assembly	B	F
compression union assembly	C	H
SERVICE-MAINTENANCE		
sweeping	C	E
mopping	C	F
vacuuming	C	E
cleaning wall	C	F
cleaning table	C	G
cleaning sink	E	G
operating dishwasher	A	C
operating washer	B	E
operating dryer	C	F
ironing	C	E

During the last reporting period, Ronald has 1) been evaluated 2) received instruction in, and 3) been re-evaluated in various tasks in activities of daily living. The figures below indicate the percentage of sequential steps that Ronald has completed independently and successfully in each task area.

	Pre-Evaluation	Post-Evaluation
showering	68%	82%
toothbrushing	86%	100%
cold meal preparation	70%	100%
streetcrossing	62%	100%
dressing	88%	100%
clothing care	50%	100%
motility in school environment	94%	100%
toileting	74%	100%

DEXTER

During the last reporting period, Dexter has 1) been evaluated, 2) received instruction in, and 3) been re-evaluated in various tasks in activities of daily living, service-maintenance, and production-assembly.

Below are indicated the initial levels for each activity at the beginning of the reporting period and the levels which Dexter reached by the end of the period of instruction.

	Pre-Evaluation	Post-Evaluation
sweeping	C	D
mopping	A	C
vacuuming	A	B
cleaning wall	A	D
cleaning table	A	E
cleaning sink	A	B
operating dishwasher	A	B
operating washer	B	C
operating dryer	A	C
ironing	C	C

Bill has recently received initial evaluations in various production-assembly activities and is currently receiving instruction in these activities following the same procedure as outlined above for the service-maintenance activites. Below are the pre-evaluation levels.

printing	D
setting type	B
operation of Gestetner	B
operation of Xerox	A
packaging educational material	C
assembly of compression union	B
assembly of valve	A

Below are indicated the initial levels for each activity at the beginning of the report period and the levels which Bill reached by the end of the reporting period.

ACTIVITY	Pre-Evaluation	Current Level
printing	D	D
setting type	B	B
operating Xerox	A	C
operating Gestetner	B	B
packaging educational materials	C	F
valve assembly	A	B
assembly of compression union	B	C
sweeping	D	E
cleaning table	C	D
cleaning windows	C	E

During the last reporting period, Bill has 1) been evaluated, 2) received a 10 week period of instruction, and 3) been re-evaluated in various activities of daily living. The figures below indicate the percentage of sequential steps that Bill has completed independently and successfully in each task area.

	Pre-Evaluation	Post-Evaluation
showering	34%	42%
toothbrushing	52%	86%
cold meal preparation	54%	76%
streetcrossing	52%	44%
dressing	96%	90%
clothing care	50%	75%
motility in school environment	54%	100%
toileting	76%	90%

MARK

During the last reporting period, Mark has 1) been evaluated, 2) received instruction in, and 3) been re-evaluated in the activities listed below. Instruction is now being given in an effort to have Mark perform independently at the highest possible level in each of these activities. Continual evaluation plus a final rating will be given for this 10 week period.

ACTIVITY	Pre-Evaluation	Post-Evaluation
printing	D	D
setting type	F	F
operating Xerox machine	B	F
Operating Gestetner copier	B	B
packaging educational materials	D	J
valve assembly	C	F
assembly of compression union	C	E

The figures below indicate the percentage of sequential steps that Mark has completed independently and successfully in each task area.

ACTIVITIES IN DAILY LIVING	Pre-Evaluation	Post-Evaluation
showering	54%	100%
toothbrushing	90%	100%
cold meal preparation	68%	96%
streetcrossing	40%	100%
dressing	100%	100%
clothing care	68%	100%
motility in school environment	100%	100%
toileting	100%	100%

HARRY

During the last reporting period, Harry has 1) been evaluated, 2) received instruction in, and 3) been re-evaluated in various service-maintenance and production-assembly activities, and acrivities in daily living. Instruction is now being given in an effort to have Harry perform independently at the highest possible level in each of these activities. Continual evaluation plus a final rating will be given for this 10 week period of instruction.

Below are indicated the initial levels for each activity and the levels which Harry reached by the end of the period of instruction.

JOHN

During the last reporting period, John has 1) been evaluated, 2) received a 10-week period of instruction, and 3) been re-evaluated in various service-maintenance, production-assembly, and daily living activities.

Below are indicated the initial levels for each activity and the levels which John reached by the end of the period of instruction.

SERVICE-MAINTENANCE	Pre-Evaluation	Post-Evaluation
sweeping	C	F
mopping	B	D
vacuuming	C	F
cleaning wall	D	F
cleaning table	D	F
cleaning sink	C	F
operating dishwasher	C	D
operating washer	C	G
operating dryer	C	G
ironing	C	E
PRODUCTION-ASSEMBLY		
printing	D	F
setting type	C	H
operation of Gestetner	B	C
operation of Xerox	D	G
packaging education material	I	I
assembly of compression union	G	I
assembly of valve	F	I

The figures below indicate the percentage of sequential steps that John has completed independently and successfully in each task area. Instruction is now being given in an effort to have John perform independently in each of these activities. As in the activities of service-maintenance and production-assembly , continual evaluation plus a final rating will be given for this ten-week period.

	Pre-Evaluation	Post-Evaluation
showering	60%	96%
toothbrushing	88%	100%
cold meal preparation	94%	100%
streetcrossing	42%	74%
dressing	94%	100%
clothing care	40%	100%
motility in school environment	88%	100%
toileting	88%	100%

	Pre-Evaluation	Post-Evaluation
SERVICE-MAINTENANCE		
sweeping	F	F
mopping	A	E
vacuuming	D	F
cleaning wall	A	F
cleaning table	C	G
cleaning sink	C	G
operating dishwasher	B	C
operating washer	A	G
operating dryer	C	G
ironing	C	C
PRODUCTION-ASSEMBLY		
printing	C	D
setting type	B	E
operation of Gestetner	B	D
operation of Xerox	-	-
packaging educational material	D	I
assembly of compression union	G	H
assembly of valve	E	H

The figures below indicate the percentage of sequential steps that Harry has completed independently and successfully in each task area of daily living.

	Pre-Evaluation	Post-Evaluation
showering	58%	96%
toothbrushing	80%	90%
cold meal preparation	0%	92%
streetcrossing	100%	100%
dressing	100%	100%
clothing care	40%	100%
motility in school environment	100%	100%

Footnotes

[1] Kanner, L., "Autistic disturbances of affective contact." Nervous Child, 1943, 2, 217-240.

[2] Gorman, G., The Nature of Childhood Autism, New York: Appleton-Century-Crofts, 1967, p 125.

[3] Galloway, C., "Precision Parents and The Development of Retarded Behavior." Lets Try Doing Something Else Kind of Thing, ed. June B. Jordan and Lynn S. Robbins. Virginia Council for Exceptional Children, pp. 92-110.

[4] Kibler, R., Barker, L., Miles, D., Behavioral Objectives and Instruction, Boston, Allyn and Bacon, Inc., 1970.

[5] Lindsley, Ogden R., "Direct Measurement and Prosthesis of Retarded Behavior." Journal of Education, 147, 1964.

[6] Lindsley, Ogden R., developer of Precision Teaching in 1964.

[7] Edwards, A. L., Experimental Design in Psychological Research. New York: Rinehart, 1950.